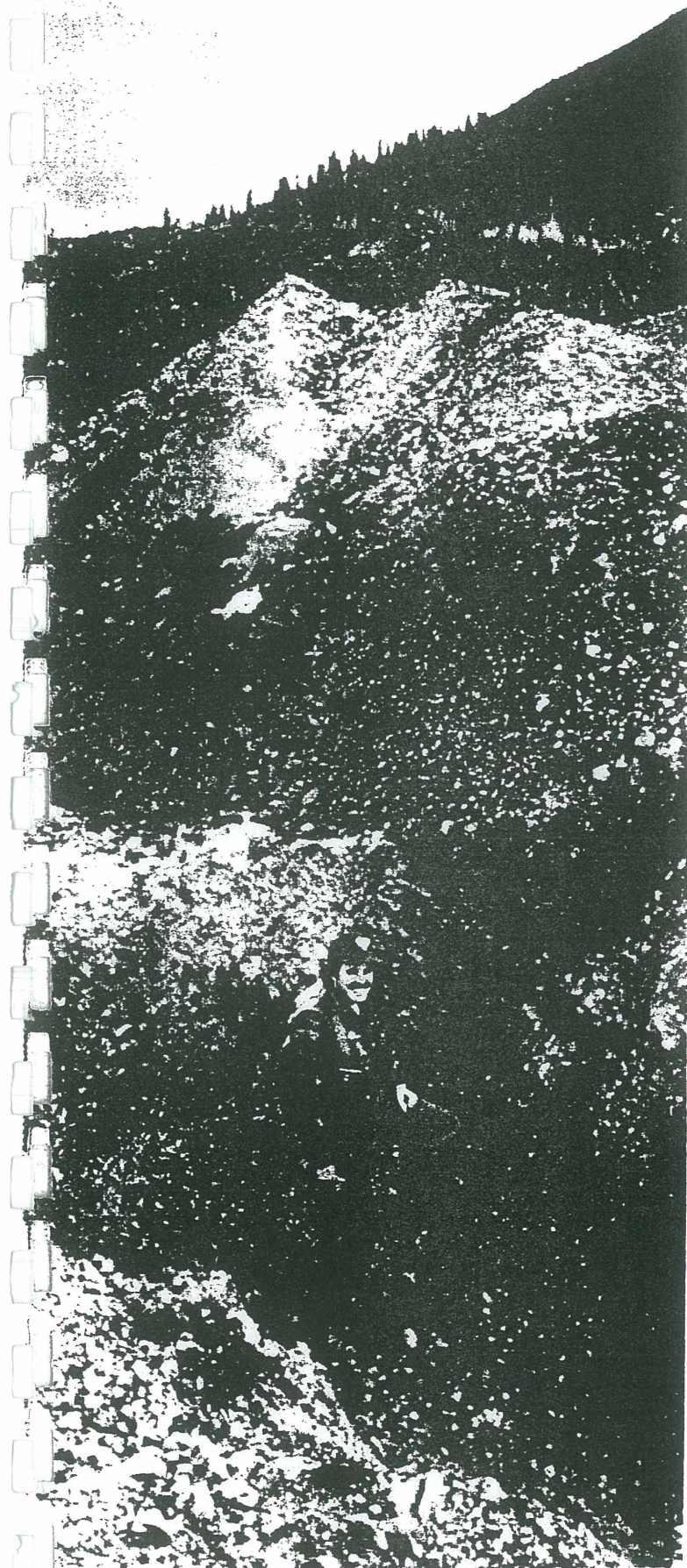


**B.Y.G.
NATURAL
RESOURCES
INC.**

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**MOUNT NANSEN
PROJECT**



Cover picture:

William D. Mann, M.Sc.,
Consulting Geologist, shows
a high-grade area exposed
in a dozer trench at the
Mount Nansen Project proposed
Flex Zone open pit.

W. M. Calhoun, Inc.
Mining Consultants
Box 90, Silverton, Idaho 83867
Phone (208) 556-2871 Fax (208) 753-2871

September 23, 1995

Gerald Metals, Inc.
High Ridge Park
Stamford, Connecticut 06904

Re: B.Y.G. Natural Resources, Inc.
Project Review

Gentlemen:

W. M. Calhoun, Inc. is pleased to submit its report on B.Y.G.'s Mount Nansen Gold Project, Yukon Territory, Canada.

The report follows the outline of the Short Form W. M. Calhoun, Inc. Due Diligence Technical Audit, which you have reviewed.

W. M. Calhoun, Inc. reviewed the project to:

- Confirm ore reserve estimates for Proven and Probable reserves of gold and silver.
- Assure that mine and mill plans were accurate and that appropriate costs are identified and determine the status of operating permits.
- Confirm B.Y.G. revenue projections based on present information and reasonable assumptions.

The W. M. Calhoun, Inc. review has not disclosed any significant technical flaws in the internally-generated B.Y.G. Feasibility Study. The study and financial projections made by B.Y.G. meet generally-accepted industry standards for a developing project due diligence review.

The study indicates that:

- Milling at 700 metric tons per day of the Brown-McDade open pit, tailings and dumps and a projected Flex Zone open pit should generate gold-silver values of \$21,609,000 based on \$385.00 gold and \$5.00 silver (U.S. dollar values).

- After operating costs* are deducted and after deducting for mill construction and the tailings impoundment costs by milling 284,116 metric tons of ore in 406 days (1.11 years), a surplus of \$10,500,000 U.S. dollars would remain.

*(See note 1, page 41)

- This is the only project that B.Y.G. will have in operation. An all-new, mine-mill operating team will have to be assembled. Personnel with operating knowledge of remote cold-area mines are currently available. How new management teams will function is an area of doubt, until a history is established.
- The mining plan should be reviewed to focus on open-pit production at an accelerated rate commensurate with the best operating costs at a reasonably high milling rate. Due to the short "good" weather season, this is very important.
- Mill start-up should be early in the year to allow a pool of reusable water to form below cover ice which will form in freezing months.
- William M. Calhoun, Inc. did not observe any major flaws in the data presented. Most of the information had been generated through studies performed by various consulting companies, so that cross-check of data was available in several cases.
- In order to promote good business management in an untested management team, any loan or hedging facility should require benchmark objective reports and on-site verification at least every 60 days during the period required to cover the initial investment.

This can be a very good operation if adequate personnel and financial resources are made available. It will be very important that on-site management has full authority, as well as the responsibility, to see that schedules are maintained.

Very truly yours,

W. M. CALHOUN, INC.



W. M. Calhoun, President

WMC:skp
Enclosure

B.Y.G. NATURAL RESOURCES INC.

TABLE OF CONTENTS

<u>Subject</u>	<u>Page</u>
Introduction	1
Disclaimer	1
History	2
Location and Access	4
Mount Nansen Property	6
Land Position and Royalties	7
First Nations Land Claiming	8
Environmental Background	9
Government Permit Requirements	10
Mount Nansen Tailings Impoundment - Final Design Report . .	11
Borrow Pit Assessment	14
Annual Precipitation	14
Lake Evaporation	15
Ore Reserve Summary and Mining	16
The Potential for Additional Reserves	21
Open Pit Mining	22
Brown-McDade Pit Layout Parameters	23
Metallurgy	25
Cyanide Destruction	29
Plant Site and Buildings	31
Plant Services	33
Socioeconomic Background of Area	34
B.Y.G. Projected Manpower Schedule	36
Exploration Potential	36
Underground Mining	37
Economics of Oxide Mining and Processing of the Brown-McDade Open Pit	39
Economics of Tailings and Dumps	42
Current Economics of the Flex Zone	43
Value Recap	45
Conclusion	47
Recommendation	48

Attachments

Estimated B.Y.G. Mill Operating Costs
 Itemized B.Y.G. Mill Labor, Reagents, Steel and Power
 Process Design Criteria
 Quotation from Orocon, Inc.
 B.Y.G. 700 MTPD Mill Conversion - Cost Summary
 Equipment List - 700 MTPD - C.I.P. Mill
 Pump Schedule
 Mount Nansen Property Claim Status
 List of Mineralogical Reports
 List of Metallurgical Reports
 General Information on Stockpiles and Tailing as Reported by B.Y.G.

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MOUNT NANSEN GOLD PROJECT

B.Y.G. NATURAL RESOURCES, INC.

DUE DILIGENCE TECHNICAL AUDIT PROJECT REVIEW

INTRODUCTION

The Mount Nansen Gold Project is wholly owned by B.Y.G. Natural Resources, Inc. The company's shares were listed on the Alberta Stock Exchange February 7th, 1995. An application has been filed for listing on the Toronto Stock Exchange. B.Y.G. acquired the Mount Nansen property and options from Chevron, who had conducted extensive exploration and had discovered the major oxide deposit. In 1994, J.M.S. and Associates joined B.Y.G. J.M.S. was a mining investing group, some members of which were Jim Smith, Doug Towers and J. Malcolm Slack.

DISCLAIMER

W. M. Calhoun, Inc. has not made a determination of property ownership nor checked the lease or royalty agreements. This should be checked by an attorney familiar with Canadian and Yukon Territory land laws.

Normal review procedures were followed for this report. No check assays or independent engineering studies were undertaken. Results of industry professionals were accepted as presented and checked where feasible.

HISTORY

In 1898, the Klondike Gold Rush spread through to placer deposits in the Yukon Territory. The Mount Nansen area creeks were staked and limited gold mining undertaken. In 1943, prospectors Brown and McDade discovered a lode deposit at Mount Nansen. The Leitch Gold Mines formed Brown, McDade Mines, Ltd. Conwest Exploration discovered the Webber deposit approximately two kilometers west and the Spud Heustis Syndicate discovered the Heustis deposit. During this time, underground drifting at Brown-McDade was undertaken, as was trenching and drilling on the three local mines. In 1963, Noranda, Rio Tinto, Newmont, Kerr Addison, Conwest and Faraday formed the Mount Nansen Syndicate and acquired the three mines which formed Mount Nansen Mines, Ltd. They conducted extensive stripping, drilling and trenching and confirmed the then current ore reserves. In 1964, Pesos Silver Mines, Ltd. acquired control of Mount Nansen Mines, Ltd. and extended the exploration, metallurgical testing and feasibility studies. In 1967, the properties were brought into limited production via a 300 ton-per-day flotation mill. Unfortunately, there was no cyanide circuit in conjunction with the mill. The mill processed 9,818 tons from Webber and Heustis mines and produced float and jig concentrates and basically just confirmed the high-grade reserves. Without the cyanide circuit, approximately 40% of the gold was lost in the tails. The 1969 gold price of \$35.00 per ounce U.S. and the lack of working capital caused operations to be suspended. These operations remained dormant until 1976. The mill was reopened again, this time to

treat ore from the Heustis mine. A total of 9,662 tons was processed, again without cyanidation. Poor recoveries and lack of capital caused operations to be suspended again. From 1976 forward, properties were tied up in creditor disputes. As mentioned earlier, B.Y.G. acquired the Mount Nansen property and the options to Chevron in 1984. Between 1984 and 1994, metallurgical testing and feasibility studies were undertaken. During this time, the B.Y.G. principals funded a placer operation on Nansen Creek which has since been turned over to two brothers who are operating it quite profitably with two assistants. B.Y.G. had a larger crew, and did not have the day-to-day, hands-on experience that the two brothers possess. Currently, the operation is well-run and apparently producing profitably. I do not have access to information further than that; however, the plant is well set up, the operating equipment is well maintained, and while a larger loader would be advantageous, it is certainly not required at the current time. The camp is clean and is well-painted and maintained. The only additional hired help is the cook who works during the summer months.

In 1994, as mentioned above, J.M.S. and Associates joined B.Y.G. Since then, the placer operation was sold and a final feasibility and environmental report was undertaken. The feasibility report was completed in-house with a number of outside reports being incorporated into the final document.

LOCATION AND ACCESS

Mount Nansen is located approximately 225 kilometers north of Whitehorse, Yukon Territory. Whitehorse is the principal population center in the Yukon Territory. Specifically, the campsite is located near kilometer 59.4 of the Nansen Creek road, which is west of Carmacks, Yukon Territory. The Nansen Creek road commences just west of the town of Carmacks. Sole access to the mine is via the above-mentioned road which is narrow and winding, approximately 5 to 6 meters wide and was first established for access to other mines during the 1900s. During 1994, B.Y.G. requested a consulting firm to join a contingent of Yukon Territory government personnel from the Transportation Branch on a field reconnaissance to determine the minimum requirements necessary for upgrading the road to accommodate B.Y.G.'s proposed mining activity. Currently, the present road is open for public traffic and is little used, except by B.Y.G. and placer miners during the summer months. As noted in the report, the Nansen Creek road shows signs of neglect consistent with its status of a little-used, low-priority trail. The parties agreed that some minor upgrading of the road would be necessary, even though the proposed mine traffic would only generate about 20 large truck movements per month, along with miscellaneous pickup trucks, crew travel and associated light vehicle activity. Access appears to be generally understood and accepted as follows:

1. The road will remain open to public traffic.

2. The Yukon Territorial Government, Transportation Branch, will continue to maintain the road during the summer months, but they will endeavor to keep it open winter and summer to accommodate year-round mining activities.
3. The Yukon Territorial Government, Transportation Branch, may be able to incorporate a few of the simpler proposed road improvements in its enhanced maintenance program. It does not have sufficient budget funds to accomplish the road upgrades required to support the proposed mine plan.
4. Regardless of any proposed road upgrade, it is expected and accepted that road-use bans, especially restricting heavy truck traffic, will have to be imposed each spring during breakup, which lasts approximately one month. It is anticipated that B.Y.G. will stock such necessary supplies, food, fuel and routine requirements and operate as best they can without much use of the road until it dries out sufficiently. Winter maintenance, especially snow clearing and mitigation of glaciation growth, etc., will greatly speed up this process.
5. The road is presently posted and restricted to 50 kilometers per hour speed limit.

Without going into detail, it is estimated that cost of the necessary improvement would be \$231,000. This does not include GST, nor does it include any allowance for miscellaneous items too

small to be specifically identified. A 10-15% allowance might be considered appropriate. This expenditure would accomplish:

- (1) Brush clearing a minimum of 4 meters back from both edges of the road.
- (2) Cutting back the slope along the inner shoulders of tight bends, thereby opening up sight distance, as well as providing a wider road surface which will be sufficient for two vehicles to pass.
- (3) Culvert replacement together with additional new culverts which are envisioned, extensions of existing culvert length, rip-rap placement at either the inlets or outlets of the culverts, cleaning out of existing culverts and cleaning of ditches adjacent to the culverts.

There are two major, well-defined drainages which are crossed by the access road. These are Rowlinson and Victoria Creeks. These crossings are both in need of special attention.

MOUNT NANSEN PROPERTY

Much of the property is held under mineral leases. These are 50-acre blocks and are for 20 years. Many of these were initiated in the 1960's and have been renewed, so title to these areas should not be too difficult to ascertain. In addition, searches were made this year in conjunction with the debentures filing. Land leases,

of 160 acres, under the Court's Mining Act are for 21 years with a \$50 initial rental payment, which upon renewal is increased to \$200. The Prospectors and Developers Association of Canada has a book out that gives a fair amount of information on the title situation in the Yukon. Two pages listing Mount Nansen property claims by name, grant and expiration date, etc. are located at the back of this report.

LAND POSITION AND ROYALTIES

The Mount Nansen property consists of 53 square kilometers and the Tawa properties consist of 12 square kilometers. Collectively, these properties comprise 330 mining claims and 30 mining leases. B.Y.G. holds 100% interest in the properties, subject to royalties. Production royalties are payable to the original optionees on both the Mount Nansen and Tawa properties. The royalty is 3% net smelter returns (NSR) on the value of production. Advance royalty payments of \$100,000 have been made on the Mount Nansen property. The maximum amount of royalties payable is \$1,750,000. There is also a 2% NSR royalty payable to a maximum of \$344,000 on the Brown-McDade leases. There is a 12-1/2% net profits payment required on the Tawa property. In addition, B.Y.G. also holds surface leases on the land where the tailings impoundment is expected to be located. They hold leases where the water supply system is located and surface leases where the mill and other buildings are located.

William D. Mann, a consulting geologist from Whitehorse who was retained by B.Y.G. to oversee some of the Mount Nansen drilling during 1995, told me that Yukon law assigns to the property holder any fractional claims within a property, providing that the property boundary is continuous.

The principal portion of the property lies at an elevation of approximately 1,200 meters and is situated in the Dawson Mountain Range. Permafrost is present throughout the property and is classed as discontinuous. The permafrost varies according to the amount of vegetation and the slope-facing direction. The general terrain consists of rounded hill-like ridges and shallow valleys. The vegetation is slight and small trees are scattered at the lower elevation. Open surface is generally covered with what is known in the north as tundra.

FIRST NATIONS LAND CLAIMING

First Nations-Little Salmon/Carmacks Band - The Bands' claims do not include the Mount Nansen site and they could claim it only with B.Y.G.'s concurrence. It is acknowledged by B.Y.G., however, that following ratification of all land claim issues, that First Nations will play a significant role in the management of affairs in the project area.

ENVIRONMENTAL BACKGROUND

The general area has been subject to a variety of mining activities since the turn of the century, which include placer mining, hardrock exploration and underground mining.

Significant environmental studies have been ongoing over approximately the last 20 years, primarily by federal government agencies. The existence of old mines, mine dumps, tailings ponds, placer workings and mining camps has provided an impetus to measure the effects on the creeks downstream from the mine. B.Y.G. states they began surveys in 1985 when recent exploration had discovered the oxide reserves which are expected to provide the backbone of the initial operation. They believe that, as a result, the baseline studies have been completed to a degree that will support approvals from the necessary agencies for issuance of appropriate licenses. Field and laboratory work has been conducted in the following areas:

1. Water quality sampling
2. Hydrology and climate
3. Stream sediment sampling
4. Acid rock drainage test
5. Wildlife reconnaissance
6. Fish sampling
7. Benthic invertebrates

GOVERNMENT PERMIT REQUIREMENTS

The primary permit required to operate a mine in the Yukon Territory is a Water License. For the Mount Nansen Project, this permit would be issued by the Yukon Territory Water Board. This board is appointed by the Minister of Indian Affairs and Northern Development. In order to be allowed to make an application for this license, a company must first pass the Environmental Assessment and Review Process (EARP). This process is used by the federal government to assess the environmental and related socio-economic impacts of development. B.Y.G. made their first formal application to proceed to this process by filing a Project Overview with the Regional Environmental Review Committee (RERC) in June of 1994. This was followed by meeting with the RERC in August of 1994 which raised numerous questions and concerns. Members of the Committee then visited the site to gain a more thorough knowledge of the project, written comments were provided to each committee member's questions by B.Y.G.

This committee then provided B.Y.G. with general and specific guidelines to prepare an Initial Environmental Evaluation (IEE). This is the document that provides full information on the proposed project, its environmental and socioeconomic consequences, its proposed impact and mitigation. The IEE was submitted in November 1994. Following the submission of the IEE, a formal application can be made to the Yukon Territory Water Board for permission to take water to operate the mine. The Board can submit the license for approval to the Minister without public hearing, assuming that

no significant interveners have responded to the various notices displayed in area newspapers. It also acknowledges the fact that RERC individuals have not raised significant concerns. This license is not granted until after an EARP screening report, followed by an EARP decision being filed. On this basis, B.Y.G. expected approval for the operation by February 1, 1995. As it now stands, it is expected that the permit could be issued in November of 1995. In spite of all the above, the company can proceed with construction and development of a mine at any time it chooses. However, it is required to have a water license before beginning milling.

B.Y.G. will be required to fund a reclamation bond. Currently, the price is \$425,000, however, B.Y.G. thinks they can reduce the premium for the bond, at least.

MOUNT NANSEN TAILINGS IMPOUNDMENT - FINAL DESIGN REPORT

B.Y.G. has retained Klohn-Crippen, a consulting firm from Calgary, Alberta, to prepare preliminary designs and has been selected to proceed with final design and ultimate construction of a tailings impoundment facility as what has been identified as Site No. 4. Their preliminary report was a letter report written in 1985, preliminary design was written in 1988, and they have done four subsequent reports on the tailings dam and location cost feasibility.

B.Y.G. authorized the final design June 5, 1995. The project layout at Site No. 4 includes a tailings dam, seepage collection dam, diversion ditch, access road, emergency spillway and closure spillway. There is a probability that the dam will require raising in the future, and B.Y.G. has scheduled that the construction of the closure spillway be delayed until such time as the mine operations are completed and final tailings level and dam crest elevation are determined. A diversion ditch and a temporary operating spillway are, however, required during operation of the facilities to divert stream flow in Dome Creek and handle runoff surcharges.

It is understood that approximately 600,000 tons of waste rock will be mined from the Brown-McDade open pit. This rock is not considered to be acid-generating and can therefore serve as a potential source of construction material for the tailings impoundment. Inasmuch as the open-pit mining probably will commence in 1996, together with the construction of the tailings impoundment, some of the open-pit waste may be used for construction. The local sandy soil in the immediate vicinity of the impoundment is expected to be used as borrow material for at least part of the initial construction.

Tailings generated from the Brown-McDade open-pit oxide ore body will total about 300,000 tons, or 240,000 cubic meters, assuming a dry weight of 1.25 tons per cubic meter for the settled tailings. The proposed tailings impoundment facility will be designed to accommodate this volume of tailings from the milled

oxide ore body. B.Y.G. has indicated there is also a possibility that permitting for the mine will be extended in the future to include additional volumes of tailings from mining and processing of a sulfide ore body which exists below the oxide, open-pit ore body. B.Y.G. has indicated that there is a good possibility of raising of the dam in two to three years to accommodate this additional tailings volume. However, the present design should only be targeted for containment of the initial 300,000 tons.

The site selected has good capacity to increase storage with modest future dam construction. This site will reduce the number of locations for tailings storage if additional reserves are exploited in the future. The tailings impoundment site is approximately 1,500 meters downstream from the existing Mount Nansen millsite. The ground elevation at the base of Site No. 4 is approximately 1,133 meters. The creek channel is approximately 10 meters wide and is overgrown with small bushes, except for a small active channel approximately one meter wide.

The tailings impoundment is designed large enough for storage of 30,000 cubic meters of mill water to provide for a minimum of two months' mill water requirement during the freeze period. Through the initial three-year mine life, it is planned to draw water from the impoundment during the long freeze period. Therefore, it is necessary to have a high water level to protect the inlet from freezing during winter months. The dam crest is set at an elevation of 1,151.5 meters, which is 1.8 meters above the

invert level in order to safely pass the design 200-year flood flow and at least 50% of the probable maximum flood (PMF).

Thaw settlement analyses, static stability analyses, static analysis, seismic analysis and seepage analyses were all run for dam design. In addition, a series of six-thermistors strings were installed during field programs at various depths up to 15 meters in the foundation areas of the main dam and seepage recovery dam. These were used to test the temperatures of the frozen soils. Pneumatic piezometers are planned for several locations and are proposed for placement beneath and within the dam embankment.

BORROW PIT ASSESSMENT

Approximately 100,000 cubic meters of sandfill is required for construction of the tailing dam embankment. The areas which have been identified for use in the dam embankment area include three sand ridges on the south-facing valley slope upstream of the dam. The primary borrow material from each of these areas is fine to medium-grained silty sand. The sand is generally frozen below the depth of the active zone and thawing of any frozen material will be required prior to compaction.

ANNUAL PRECIPITATION

Precipitation in the Mount Nansen area occurs primarily as snow from November to the end of April. On average, approximately 40% of the annual precipitation falls as snow, which corresponds to

the typical snowpack of one meter, which is normal for the area. Some rains occur as early as April, but most of the rainfall occurs from June to August.

LAKE EVAPORATION

The closest station for which lake evaporation data is available is Pelly Ranch, which is about 80 kilometers north of the mine site at an elevation of 454 meters. In general, the precipitation was shown as an average of 270 millimeters per month for the year. A 10-year dry-year period was 200 millimeters per month and the 200-wet-year return was given as 410 millimeters per month and average monthly evaporation is 454 millimeters per month.

All the above data were used to design the diversion channel and emergency spillway and for completion of dam design.

It is planned to utilize cyanide destruction at the millsite to insure that little cyanide should be contained in the tailings to be stored at this impoundment. Performance of the dam will be monitored throughout the mine operating period. A closure spillway will eventually be required on the south abutment where bedrock can be exposed to the channel inverted for long-term protection.

Comments on this tailings impoundment have been made in detail because it has been the prime holdup for issuance of the water license, which, as previously stated, is required for a mining operation in the Yukon.

ORE RESERVES SUMMARY AND MINING

The Brown-McDade, Webber and Heustis deposits, and the exploration target known as the Flex Zone, together with several stockpiles, have been identified for their gold value on the Mount Nansen property. A variety of reserve estimates have been previously completed on each of the deposits. These estimates and supporting data have been reviewed by B.Y.G. In some cases, such as the Webber and Heustis deposits, these estimates have been accepted by B.Y.G. with only minor modifications. In other cases, such as the Brown-McDade, the estimates have been recalculated to incorporate new data. Immediately following this section is mineral inventory table, No. 5.0. From the B.Y.G. Feasibility Study, the following comment is quoted in total.

"Table 5.0 summarizes the mineral inventory for the Mt. Nansen property. The total mineral inventory includes all of the mineralized reserve including currently economic reserves as well as Possible reserves which could provide to be economic in the future. The mineral inventory is considered "in situ".

Mining reserves have also been developed for the Mt. Nansen gold deposits (Table 5.0). Only those reserves classified as Proven and Probable are included in the mining reserve. Mining reserves incorporate dilution factors based on the geometry of the mineralization, stability of the host rocks and proposed mining methods..."

Table 5.0 Mt. Nansen mineral inventory and mining reserves.

		Proven			Probable			Possible			Total Mineral Inventory		
		Tonnes	Au g/t	Ag g/t	Tonnes	Au g/t	Ag g/t	Tonnes	Au g/t	Ag g/t	Tonnes	Au g/t	Ag g/t
Brown-McDade	OP	85,296	7.1	67	108,820	7.2	73	7,486	5.4	35	201,602	7.09	69
	UG	76,519	7.7	66	164,612	6.7	56	57,275	5.9	47	298,406	6.80	57
	LG	45,640	1.9	25	64,835	2.1	24	6,753	0.9	15	117,228	1.95	24
Webber	UG	30,963	10.3	645	27,563	10.8	550	26,906	7.0	472	85,432	9.42	560
Heustis	UG	40,964	14.9	277	44,764	13.1	289	38,118	14.3	309	123,846	14.06	291
Flex	OP							62,606	7.4	178	62,606	7.40	178
	UG							52,245	7.7	226	52,245	7.70	226
Dumps & Tailings					68,038	5.1	125				68,038	5.06	125
Total Mineral Inventory		279,382	7.9	154.7	478,632	6.8	116	251,389	7.9	201	1,009,403	7.38	148

		Proven			Probable			Total Mining Reserve			Recoverable Mining Reserve		
		Tonnes	Au g/t	Ag g/t	Tonnes	Au g/t	Ag g/t	Tonnes	Au g/t	Ag g/t	Tonnes	Au g/t	Ag g/t
Brown-McDade	OP	85,296	7.1	67	108,820	7.2	73	194,116	7.2	70	196,702	7.15	70
	UG	76,519	7.7	66	164,612	6.7	56	241,131	7.0	59	235,050	7.00	59
	LG	45,640	1.9	25	64,835	2.1	24	110,475	2.0	24	63,148	2.00	25
Webber*	UG	30,963	10.3	645	27,563	10.8	550	58,526	10.5	600	85,432	9.40	560
Dumps & Tailings					68,038	5.1	125	68,038	5.1	125	68,038	5.06	125
Total Recoverable Mining Reserve - Base Case A											648,370	6.67	132

Units: SI

OP - Open pit reserve

UG - Underground reserve

LG - Low grade reserve

Mining dilution included

*Webber recoverable mining reserve includes possible reserves

In B.Y.G.'s Feasibility study, they used definitions for Ore, Proven, Probable and Possible reserves as set by the Canadian Provincial Securities Administration and outlined in National Policy 2-A. Ore, Proven and Probable definitions basically fit, though worded differently, the current United States Securities and Exchange Commission guidelines. Possible reserves are not included in U.S. securities guidelines. The reserves which are of immediate interest and will provide the greatest impact on the project economics are the Brown-McDade open pit reserves, Proven and Probable, which are shown as total mining reserves at 194,116 tons at 7.2 grams gold per ton and 70 grams silver per ton. Additional drilling was accomplished this year and more will be required in the early part of 1996 season for final delineation of the Flex Zone. The reserves carried in the Possible category at 62,606 metric tons may, in fact, exist at that quantity. However, the pit has not been laid out, nor has the final reserve been calculated. In looking at the data, it appears feasible that at least 50,000 metric tons of approximately the same grade as currently given, 7.4 grams gold, or some equal combination, may ultimately be mined. These are not carried as Proven or Probable reserves; hence they are not used in the economic calculations. An arbitrary conservative value was assigned and used for the economic calculation.

The tailings dumps that are in the immediate area are listed as carrying 68,038 metric tons at 5.1 grams of gold and 125 grams of silver per ton. Sampling dumps and tailings is always difficult and, normally, recovery is not as great as the calculations

indicate. This is due to rough surface bottom, lack of access for economic recovery, etc. Accurate sampling of dumps and tailings are difficult and fraught with numerous factors that can produce substantial errors. Looking at previous mine grades from underground where this was mined would lead me to believe that the gold grade may not be in error. However, for calculation purposes to be on the safe side, I think 75% of the tons and 75% of the grade should provide an adequate safety factor. I questioned William D. Mann, who was the geologist in charge of some of the drilling in the Flex Zone this year. He stated, as mentioned above, that the pitting had not been designed, but his best guess, at that time, with the information he had at hand, would be that about 70,000-80,000 metric tons would be realized. The grade presently quoted, he felt, possibly was a bit high. If fully diluted, and with a mining plan which has not yet been computed, he thought that the Flex Zone would provide a grade of approximately 5-6 grams of gold per metric ton as mined.

Current plans for open pit mining of the Brown-McDade deposit are to mine 201,602 metric tons at 7.09 grams of gold and 70 grams of silver per ton for mining of the high-grade with a strip ratio of 4.07 to 1. If the low-grade is mined, the combined grade will be reduced and the strip ratio will drop to 2.5 to 1. I used 194,116 tons at 7.2 grams of gold per ton, the "total mining reserve", for the economic calculations, as they are slightly more conservative. The low-grade is not included in the economic estimates since the cash flow should have been sufficient to have repaid Gerald prior to mining the lower grade material.

The specific gravity used in calculation for the pit reserves was 2.45 tons per cubic meter; 2.56 tons per cubic meter was utilized for the underground reserves.

"5.2 Definitions

In this report the terms Ore, Proven, Probable and Possible Reserves are used as defined in the guidelines set by the Canadian Provincial Securities Administrators and outlined in National Policy 2-A.

Ore means a natural aggregate of one or more minerals which, at a specific time and place, may be mined and sold for a profit, or from which some part may be profitably separated.

Proven means that material for which tonnage is computed from dimensions revealed in outcrops, trenches, underground workings or drill holes and for which the grade is computed from the results of adequate sampling, and for which the sites of inspection, sampling and measurement are so spaced and the geologic character so well defined that the size, shape and mineral content are established, and for which the computed tonnage and grade are judged to be accurate within limits for which it shall be stated and for which it shall be stated whether the tonnage and grade of proven reserves are "in situ" or "extractable", with dilution factors clearly explained.

Probable means that material for which tonnage and grade are computed partly from specific measurements, samples or production data, and partly from projection for a reasonable distance based on geological evidence, and for which the sites available for inspection, measurement and sampling are too widely or otherwise inappropriately spaced to outline the material completely or establish grade throughout.

Possible means material for which quantitative estimates are based largely on broad knowledge of the geologic character of the deposit and for which there are few, if any, samples or measurements, and for which the estimates are based on assumed continuity or repetition for which there are reasonable geologic indications, which may include comparisons with deposits of similar types, and bodies that are completely concealed if there is specific evidence of their presence, and (i) estimates of possible reserves shall include a statement of conditions within which the material occurs, and (ii) since the arithmetic average of any amount of sampling is not necessarily representative unless the distribution of values is properly taken into account, a statement of how the samples were taken shall be given, and where mineralization is erratic, the method of treating the erratic values shall be given in the narrative of the report, and (iii) possible must not be added to other categories of reserves and their inclusion is not acceptable in any economic analysis or feasibility study of a project."

THE POTENTIAL FOR ADDITIONAL RESERVES

The Brown-McDade pit design was accomplished in a manner which would leave the underground development and existing drift unexposed by the bottom of the pit. I believe that when the pit is mined, there will be some good high-grade intercepts that will continue below the current design bottom; thus, re-design of the pit will be an economic necessity. Exploration and decline development drifting can be accomplished from the current adit elevation which appears, to me, to be more viable than driving a long development decline from the ultimate Brown-McDade south pit floor.

Mineralization is expected to continue to depth on the three deposits mentioned above, and in the Flex area it was recently drilled to depth. Other mineralized zones exist on the property and are as follows:

The Heustis North, Dickson, Orloff King, Goulter, Klaza, BRX and Porphyry Copper areas are all expected to be further explored. There is also the possibility, on the surface near the mine, for two to three small open pits of unknown size, but probably in the 5,000-20,000-ton categories with grades possibly higher than those currently figured for the Brown-McDade pit. These shallow pits could be mined contemporaneously and probably milled towards the end of the initial major milling campaign. No economic value has been assigned to these possible pits. From a conceptual standpoint, and prior to final calculations for this report, I have

considered that the initial milling would be only from open pit material. It appears that if the mill is built as currently being discussed (700-ton crushing capacity), and the carbon columns purchased from FMC's Atlanta, Nevada operation are installed, excess absorption capacity will exist. With the friability of the oxide ore, it is very probable that upwards of 1,000 to 1,200 tons can be treated. The initial permit application was made for 350 tons per day, but this was figured on an annual basis. Therefore, for a short summer milling program, the 700 tons per day is said to be acceptable. As soon as operations are satisfactory in all sections of the plant, including the tailings impoundment, it is the intent of B.Y.G. management to request an increase in the permitted annual tonnage.

OPEN PIT MINING

The oxidized portion of the Brown-McDade deposit lies within a shattered, fractured and altered granodiorite. There are also bands of friable clay-rich material lying in and generally parallel to the strike of the ore zone. The footwall contact of the ore zone is either directly against or within a few meters of a competent, fresh, unaltered granodiorite.

The footwall of the ore zone has a fairly steep inclination and generally ranges from 65-70° dip in the South Lens and is fairly consistent at 62° in the main, or North Lens. The zone at the extreme north end of the section flattens to approximately 54°. The surface appearance of the material is such that much of it can

be removed without blasting. With a ripper, it should be possible to free a large portion of the material for loading. The altered granodiorite waste will require some drilling and blasting. The fresh granodiorite footwall rock will require drilling and blasting throughout. The approach to mining the North Lens will be to locate an access roadway in the hanging wall east side of the ore zone. A roadway, in effect, will flatten the average slope of the open pit wall, which is desirable in this case since a low-angle fault wall will likely be required from a slope stability standpoint. The South Lens will be accessed from the south end directly off the hillside and will employ a series of horizontal cuts until the waste-ore ratio reaches its economic limit. Depending on the gold and silver prices, it is apparent that the economic limit will be at approximately the 1,250-meter elevation.

BROWN-McDADE PIT LAYOUT PARAMETERS

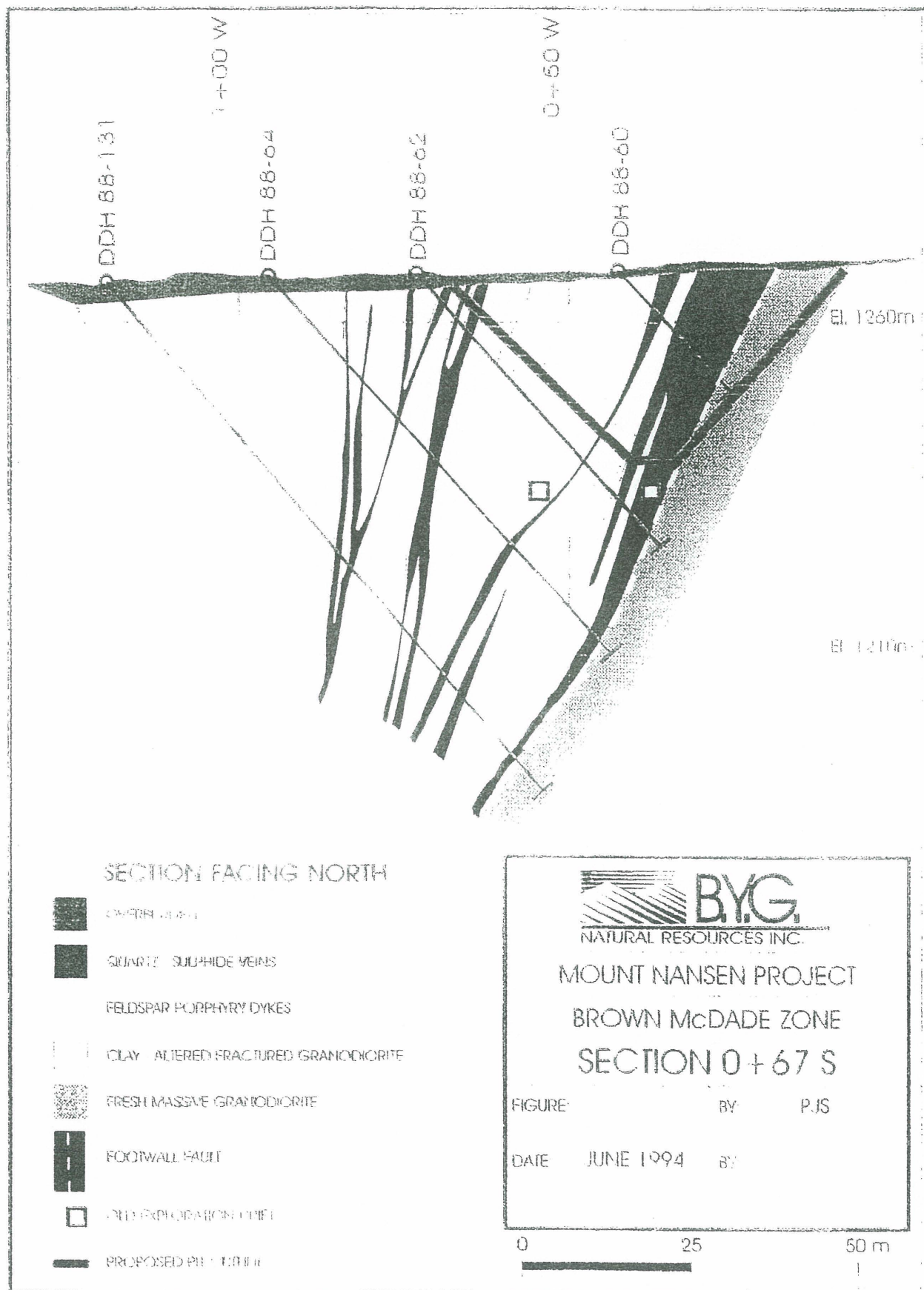
- Maximum berm to berm slope, altered granodiorite, 45°;
- Maximum berm to berm slope, fresh granodiorite, 73°;
- Bench height, 5 meter, single bench hangingwall and triple bench footwall. 5 meter berm width left every third bench in the footwall;
- Roadway developed 12 meter width, at a maximum grade of 10%;
- Final wall slope on hangingwall side was 30° at roadway, and 45° elsewhere;
- Final slope wall on the footwall was 57° at the steepest point, and 45° at its flattest;
- Maximum vertical depth on footwall side 30 meters; and,

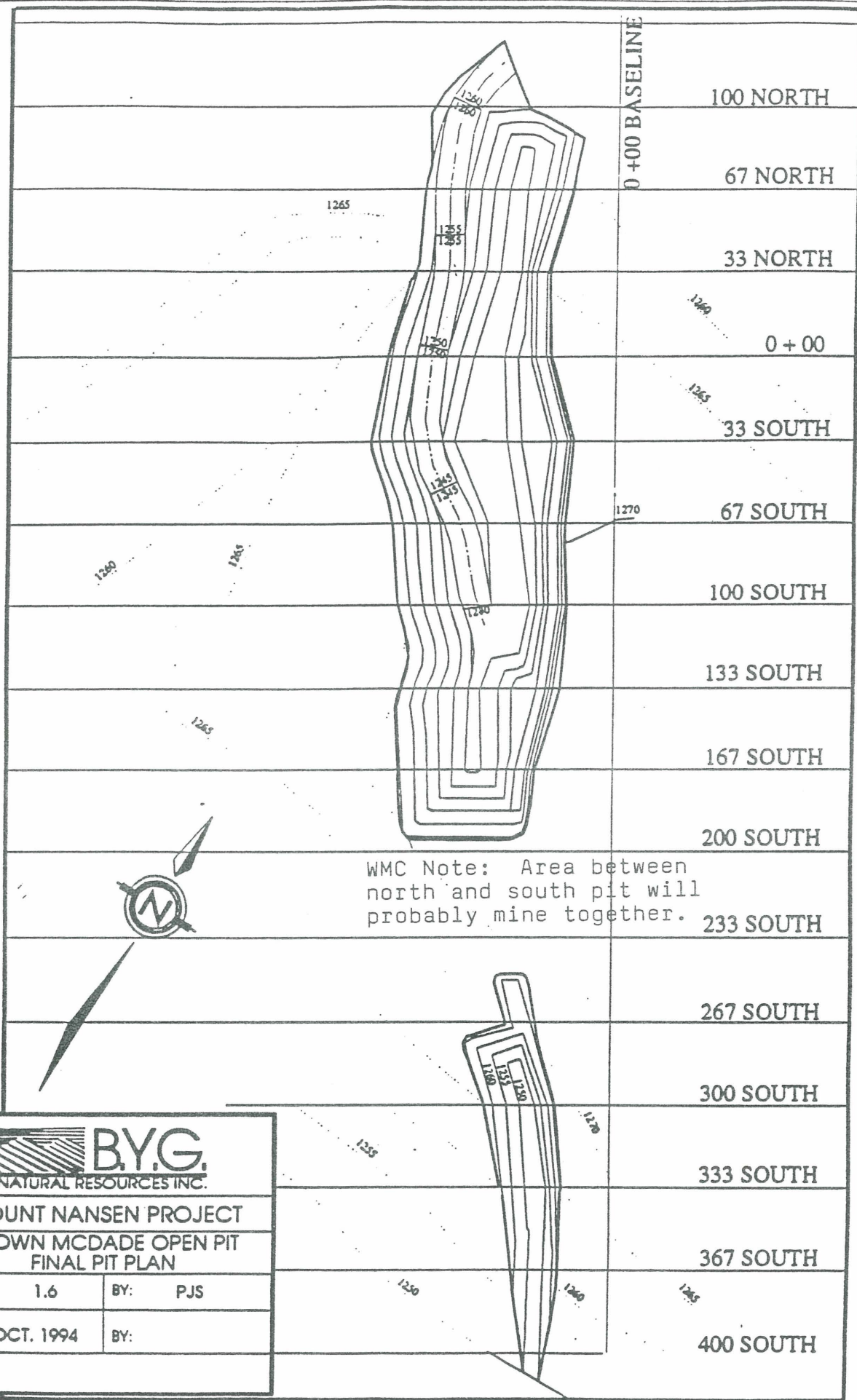
- Maximum vertical depth on hangingwall side 25 meters, and average depth about 22 meters.

No in-depth comment is made in this report on the underground mining because it will probably take place contemporaneously only as access and initial development with very limited production during the open pit mining. The limited production will be solely from drifting through ore zones that might be encountered. The main economics will be from the initial open pit mining.

For the best return on invested dollars, the open pits should be mined first. It would be feasible to begin driving the declines to access the Brown-McDade underground mineralization sometime after the middle of the summer. The same could also be done to access the Webber and, possibly, even the Huestis mine. If the development is successful, mining could proceed during the winter and ore could be stockpiled at the portals. Hauling and milling of Webber ore could be accomplished during the summer months.

I expect that, prior to driving the footwall ramp which is shown in the longitudinal section, Figure 1.9, that Lens 4, Lens 5 and Lens 6 will have some deep holes drilled beneath them. These ore shoots probably extend downward. It would make sense to begin drifting from near the existing portal of the 1235 level and drive a downgrade heading which would access Lens 3, 4, 5 and 6. The footwall zone below Lens 7 could be ramped to Lens 5 and 6. This would certainly shorten the exploration and development from underground and should increase the economics of the project.

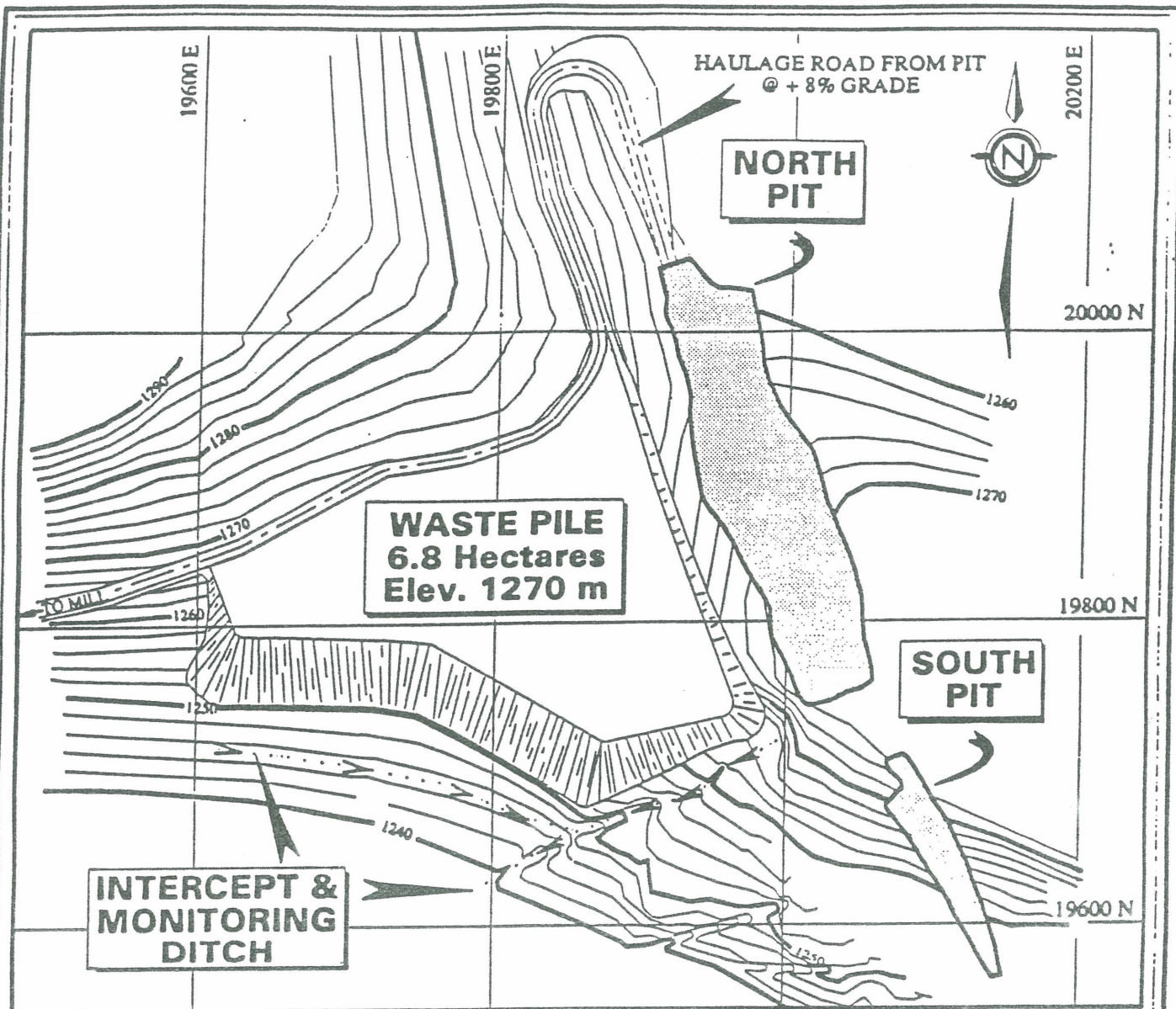




**MOUNT NANSEN PROJECT
BROWN MCDADE OPEN PIT
FINAL PIT PLAN**

FIGURE: 1.6 BY: PJS

DATE: OCT. 1994 BY:



NOTES

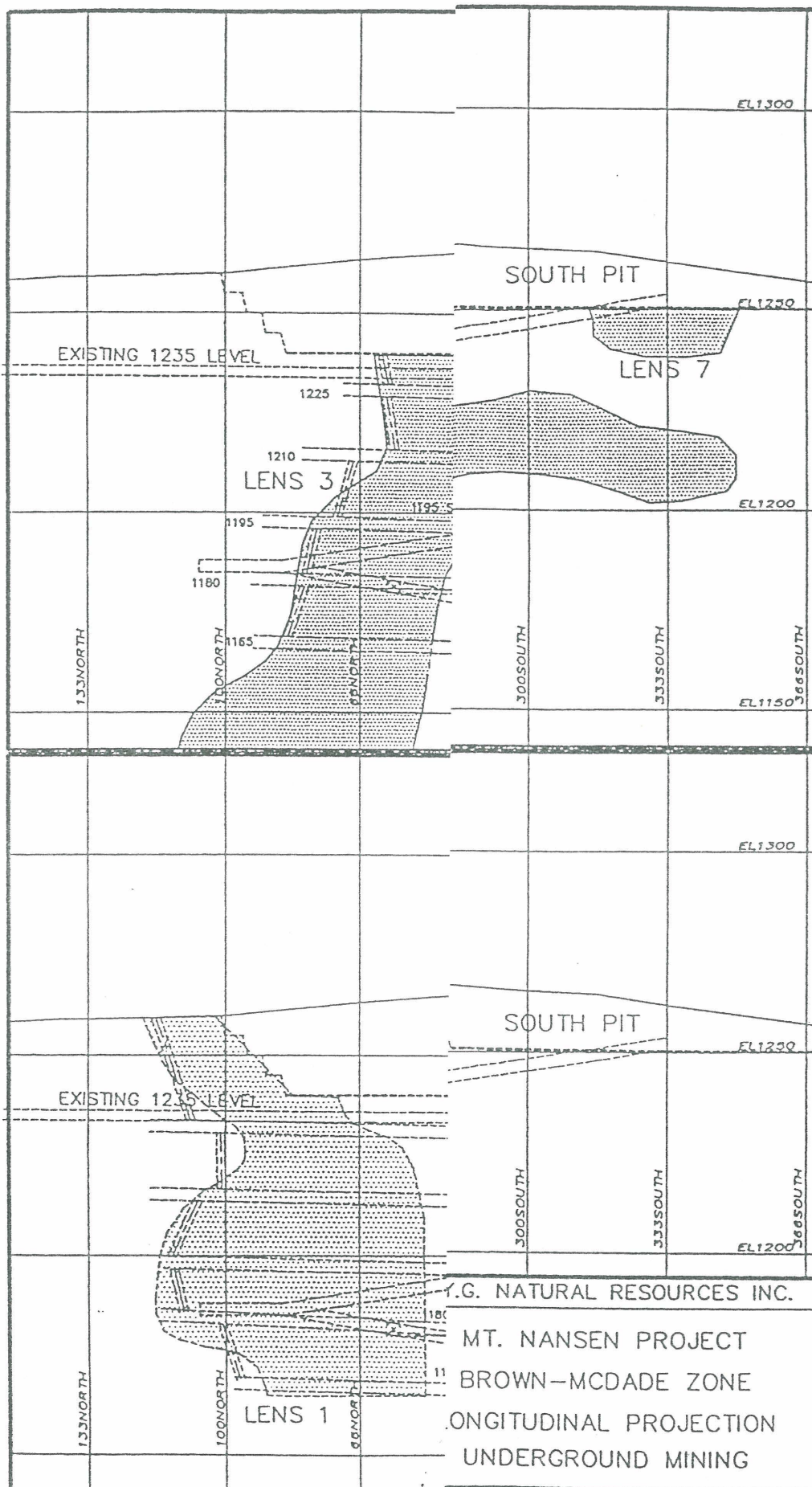
1. Topsoil to be stripped and stored for future reclamation of waste pile before waste rock is dumped
2. Maximum slope of waste rock pile not to exceed 28 degrees



MOUNT NANSEN PROJECT BROWN MCDADE OPEN PIT SITE PLAN

FIGURE: 1.7 BY: PJS

DATE: Oct. 1994 BY:



YUKON ENERGY MINES
& RESOURCES LIBRARY
P.O. BOX 2703
WHITEHORSE, YUKON Y1A 2C6

FIGURE 1.9

This is further in the future than the cash flow required for loan payback that will probably be required, so therefore, this comment is for background information on the underground portion.

METALLURGY

Metallurgical test work for oxide ores is stated by B.Y.G. to have begun in 1985. Tests for both conventional cyanide plant treatment and also for vat and heap leach technology were conducted. This work was carried out initially under the direction of Chevron Resources at the Hazen Research Labs. Later on, additional laboratory work was conducted by Coastech Research, Inc. and at Lakefield Research, Ltd. Additional work included examination of the sulfide ores and in-depth testing for both conventional cyanidation and heap leaching. This work was, for the most part, carried out under the direction of Melis Engineering, Ltd. The metallurgical projections used to develop the flow sheet for this project resulted from Melis' interpretation of the Coastech work on several composite samples, as well as those of individual bottle-roll tests for each drill hole mineral intersection in the Brown-McDade oxide zone. These projections were further modified following a review of all data by Celec, Inc. The most recent technology considered resulted in the selection of a CIL (carbon-in-leach) process as a means of treating the oxide ore. Finally, Process Research Associates did test work directed at predicting the affects of cyanide destruction on tailings effluent. This will be commented on separately.

A series of bottle-roll cyanidation tests on individual mineralized interesections from the Brown-McDade diamond drill holes were used to scope out two composite samples representative of the north and south lenses. These composites and the results of the bottle-roll tests were used to provide what currently is the final design test work on the oxide ore. A grind of 70% -74 microns was shown to provide gold recoveries of 90.1% at a head grade of 7.15 grams of gold per ton. Grinding in cyanide with pre-aeration and addition of lead nitrate did not show any significant improvement for gold extractions. Cyanide solutions as low as 0.3 grams NaCl per liter gave acceptable gold extractions with minimal cyanide consumption. Filtration test results were not acceptable and, as such, the Merrill-Crowe gold recovery approach was discounted for the Brown-McDade deposit. Carbon-in-leach is the method presently considered for the revamped mill. With 24 hours of leach retention time, processing for overall extraction is expected to be sufficient. The majority of the gold is expected to be recovered during the first five hours of processing. The CIL approach also should eliminate some of the re-adsorption of gold that was noted in the other recovery procedures. An abbreviated verbal walk-through of the revamped mill would be as follows:

Ore preparation - Ore will be dumped directly from the open pit haul trucks or from the run-of-mine ore stockpile via front-end loader into a dump hopper. Feed from the dump hopper will enter the current 400-ton ore bin, which is expected to be increased to approximately 500 to 600 tons live storage. Ore will be drawn from the bottom of the ore storage bin by a vibrating feeder, feeding a

conveyor belt discharging into the primary jaw crusher. The jaw crusher will discharge to a belt conveyor which will also receive the cone crusher discharge.

The combined cone and jaw crusher products will be transferred to another belt that feeds a vibrating screen. The -10 millimeter screen material will be transferred to the fine ore storage bin via another conveyor belt. The screen oversize +10 millimeter material is planned to be returned directly to the cone crusher. A reversing conveyor at the top of the fine ore storage bins permits the discharge of crushed ore to either bin. The fine ore storage bins both have 250-ton live capacity.

Grinding - Fine ore from each bin will be transferred to the gravity circuit via feed slots and variable-speed conveyor belts. The ore will be ground in a single-stage ball mill in closed circuit with hydrocyclones to give a 70% -74 micron (i.e., 200-mesh grind). The cyclone underflow will be recycled to the ball mill for further grinding and cyclone overflow from the grinding circuit will be discharged to a 15-meter-diameter thickener equipped with a high-rate feed wall for thickening to 50% solids prior to cyanidation. Lime will be added to the grind circuit as required for pH control.

Cyanidation - The thickened slurry will initially be leached in a cyanidation tank to provide excess leach retention time. Lime will be added to maintain the pH at +10.5 to 11 during cyanidation. Sodium cyanide will be added to the solution cyanide concentration

to maintain it at 0.3 grams NaCl/L. A Roots blower will provide low-pressure air to the tank to give the required oxygen content to the leach pulp. The thickened slurry will then be leached in a series of CIL tanks to give an overall retention time sufficient for the expected recovery rate.

Gold Recovery - Carbon will be loaded into the last CIL tank and retained in each tank by utilizing equalized-pressure launder screens. Carbon transfer between tanks will be accomplished with air lifts. The transfer of gold-loaded carbon to the loaded carbon screen will be accomplished via a recessed impeller pump. Loaded carbon will be discharged from the screen to an acid wash tank, and after washing, will be transferred via an eductor to the atmospheric carbon strip tank. Gold will be stripped from the carbon with a hot, caustic cyanide solution. This loaded eluate will be stripped of gold electrolytically onto stainless steel cathodes. The gold will be removed from the cathodes by washing. It will then be filtered and then smelted in a conventional furnace to produce doré. It is anticipated that the gold-silver production will require the movement of 2+ tons of carbon per day. Each third batch of stripped carbon will be acid washed to maximize carbon loading efficiencies. The stripped carbon will be screened on a sizing screen to remove the carbon fines prior to reuse in the CIL circuit. Soaked carbon will be added to the circuit as required.

CYANIDE DESTRUCTION

The summary of the Process Research Associates cyanide destruction is as follows: Process Research Associates received 178 samples of pulverized drill core from Mount Nansen. These were combined to create a composite sample weighing 33 kilograms. A 20-kilo split of the sample was subjected to CIP cyanide leaching and the barren pulp was treated using Inco's SO_2 /air cyanide removal process. Gold and silver grades of the material were determined to be 6.34 grams of gold per ton and 65.1 grams of silver per ton. Cyanide leaching extracted 80.8% of the gold and 38.2% of the silver. The primary process variables for the SO_2 /air treatment are: SO_2/CN_T ratio (SO_2 was added as an aqueous $\text{Na}_2\text{S}_2\text{O}_5$ solution), copper dosage, dissolved oxygen level, pH and reactor retention time. The dissolved copper level in the barren solution was 83 mg/l, so no copper addition was required for the process. The pH controller was set at 8.5, however, after nine hours of continuous operation, the pH had not dropped, and therefore no lime addition was required. With a reactor retention time of 60 minutes, the picric acid cyanide (CN_p) level of 109 mg/l was reduced as low as 0.06 mg/l. The CN_T levels were reduced from 98.5 mg/l to 0.09 mg/l. Decreasing the retention time to 30 minutes resulted in a CN_p level of 8 mg/l. By aging the treated effluent for seven days, the CN_T level was reduced to 0.005 mg/l. The SO_2 /air treatment caused arsenic to increase, i.e. dissolve, in the concentration from 1.95 mg/l to 4.85 mg/l. Aging for up to 14 days did not reduce arsenic levels. In fact, the arsenic levels increased slightly to 5.6 mg/l.

Analysis of Mount Nansen Project Composite Ore Sample

Fire assay	
Au (g/t)	6.34
Ag (oz/t)	65.1
ICP Analysis	
Ag (ppm)	64.7
Al (%)	0.36
As (ppm)	6237
Au (ppm)	9
B (ppm)	3
Be (ppm)	60
Bi (ppm)	33
Ca (%)	0.59
Cd (ppm)	17.9
Co (ppm)	1
Cr (ppm)	32
Cu (ppm)	496
Fe (%)	5.88
K (%)	0.41
La (ppm)	4
Mg (%)	0.09
Mn (ppm)	968
Mo (ppm)	1
Na (%)	0.01
Ni (ppm)	2
P (ppm)	0.041
Pb (ppm)	4307
Sb (ppm)	542
Sr (ppm)	57
Th (ppm)	2
Ti (%)	< 0.01
U (ppm)	< 5
V (ppm)	16
W (ppm)	< 1
Zn (ppm)	1335

Using an acid base accounting test, the treated effluent residue revealed that the material contained 0.59% sulfide sulfur and the net neutralization potential (NNP) was -5.61. Despite negative NNP, it is not expected that acid rock drainage would be a problem since the sulfide sulfur content is very low. This test means that on a basis of CaCO_3 (i.e. lime) that per 1,000 tons of material, the neutralization potential is short by 5.61 tons of CaCO_3 and/or its equivalent.

Additional testing should be undertaken to find a method to retain, treat or complex the arsenic to a more normal range.

The treated tailings slurry will be allowed to flow from the mill to the tailings containment area, which is approximately 1,500 meters horizontally and 100 meters vertically below the mill.

Reclaim water from the tailings disposal area will be returned to the mill by pumping. Present projections show that, assuming average climatic conditions, there will not be a release of effluent from the tailings pond during the initial three-year operation. B.Y.G. commented that if it should become necessary to release effluent to the environment they will have to treat the water to reduce arsenic and antimony levels. In such case, water will be pumped to the mill for treatment prior to release.

Reagent handling is conventional with nothing out of the ordinary being utilized in the process nor stored in the area.

**SO₂/AIR DETOXIFICATION OF THE MOUNT NANSEN TAILINGS
SUMMARY OF EFFLUENT ANALYSES**

Metals (µg/L)		Untreated Solution	Treated Product	7 day Open	7 day Closed	14 day Open	14 day Closed
Aluminum	Al	<0.20	<0.20	<0.20	<0.20	5.6	5.6
Antimony	Sb	0.61	0.88	0.84	0.84		
Arsenic	As	1.95	4.85	4.86	5.15		
Barium	Ba	0.016	0.022	0.019	0.016		
Beryllium	Be	<0.005	<0.005	<0.005	<0.005		
Bismuth	Bi	<0.10	<0.10	<0.10	<0.10		
Boron	B	<0.10	<0.10	<0.10	<0.10		
Cadmium	Cd	<0.010	<0.010	<0.010	<0.010		
Calcium	Ca	682	621	598	608		
Chromium	Cr	<0.015	<0.015	<0.015	<0.015		
Cobalt	Co	0.03	0.039	0.042	0.042		
Copper	Cu	13.5	0.746	0.217	0.290		
Iron	Fe	<0.030	0.05	0.058	0.035		
Lead	Pb	<0.050	<0.050	<0.050	<0.050		
Lithium	Li	<0.015	<0.015	<0.015	<0.015		
Magnesium	Mg	2.39	7.04	9.16	9.09		
Manganese	Mn	0.014	0.037	0.046	0.042		
Molybdenum	Mo	<0.030	<0.030	<0.030	<0.030		
Nickel	Ni	<0.020	<0.020	<0.020	<0.020		
Phosphorus	P	<0.30	<0.30	<0.30	<0.30		
Potassium	K	69.1	82.4	71.3	73.3		
Selenium	Se	<0.20	<0.20	<0.20	<0.20		
Silicon	Si	5.25	9.48	8.58	8.80		
Silver	Ag	0.018	0.038	0.049	0.048		
Sodium	Na	218	437	411	417		
Strontium	Sr	1.41	1.37	1.32	1.35		
Thallium	Tl	<0.10	<0.10	<0.10	<0.10		
Tin	Sa	<0.30	<0.30	<0.30	<0.30		
Titanium	Ti	<0.010	<0.010	<0.010	<0.010		
Tungsten	W	<0.10	<0.10	<0.10	<0.10		
Vanadium	V	<0.030	<0.030	<0.030	<0.030		
Zinc	Zn	0.069	0.009	0.027	0.005		

General spill controls, if followed as planned, should be adequate to protect the environment from accidental discharges.

Metallurgical results from a variety of ores treated at Mount Nansen are indicated below. The possibility of using heap leach for treatment of low-grade mineralization for the various pits and/or discovery of heap leach potential in other areas has not been discounted.

<u>Source of Ore</u>	<u>Process</u>	<u>Gold Recovery</u>	<u>Silver Recovery</u>
Brown McDade Oxide	Cyanide	90.16%	55.77%
Brown McDade Sulphide	Cyanide	83.59%	45.77%
Flex Oxide	Cyanide	79.90%	62.60%
Webber Mixed Oxide/Sulphide	Cyanide	80.40%	89.90%
Webber Mixed Oxide/Sulphide	Flotation/Cyanide	90.30%	96.10%
Heustis Sulphide	Flotation/Cyanide	90.30%	96.10%

PLANT SITE AND BUILDINGS

The support plant for the proposed mining and milling operation will be generally located around and in close proximity to, the existing mill building. The lone exceptions will be the pumphouse on Victoria Creek, and the powder and cap magazines. The following buildings and installations will be used:

- Mill building - currently in place, will make internal alterations, including the installation of a new cyanide circuit;

- Power plant - will be installed adjacent to the mill;
- Assay laboratory - new installation within existing warehouse building;
- Shop - existing steel storage shed will be modified for equipment repair;
- Pumphouse - this building on Victoria Creek will be rehabilitated with new pumps installed;
- Powder and cap magazines - portable trailer units will be established in Pony Creek drainage;
- Camp/kitchen complex - an existing building has been rehabilitated for a cafeteria, and a recreation hall for staff personnel has been constructed above the current mine office. A bunkhouse has been installed adjacent to the office and kitchen complex. It is made up of assembled portable trailer units for bunkhouse, toilet, shower and laundry facilities;
- The mine office and the first-aid room are currently in operation. Portable trailer units may be located north of the mill at the entrance to the mill yard.

During my plant visit in late August, start-up of the new kitchen and mess hall was imminent. The staff dormitory and the mine office was just a few days away from completion.

Clean-out of the mill and removal of no-longer-required items was almost complete. Outside work was taking first preference in order to be completed prior to cold weather. Aggregate for cement will be stored inside the proposed CIL building prior to onset of freezing weather.

Mill equipment sourcing is well underway with major equipment items either optioned or covered by a purchase contract. This should allow mill work to get underway as soon as financing is completed and the water permit is issued.

PLANT SERVICES

Fresh water will be pumped from the existing wells on Victoria Creek through a relocated 4" continuous welded steel pipe to the mill.

Potable water - a feeder line off the 4" fresh water line will feed a water treatment system which will supply potable water to the mill, office and camp.

Reclaim water from the tailings pond will be pumped for use as make-up water in the mill. A submersible pump will be installed in the tailings pond to feed a supply pump in the mill. This pipeline will be a heat-taped and insulated 4" line.

Sewage and waste water from the mill operations will be collected in a variety of sumps and collections ponds. Water and

effluent captured in these sumps will generally be returned to the appropriate part of the mill flow sheet. Waste water from toilets, washrooms and kitchen/camp will be directed to a septic tank and field suitable for use in northern operations.

Power will be from portable generating sets which have not been selected, but are expected to be Caterpillar units of approximately 625 KW each. Two will be required for operation and one will be kept on standby and for maintenance rotation. It is currently planned to incorporate heat exchangers from the power units exhausts to provide a major part of the winter heating requirements in the mill. Fresh water pumps at Victoria Creek will be powered by an overhead power line from the above-mentioned generator sets, as will the tailings pond line, which will be powered by a drop off from the power line to the fresh water pump.

Communication is presently provided via a microwave telephone system. A fax is also hooked into the microwave system.

The assay laboratory will be a standard fire assay laboratory and will have a conventional atomic absorption photospectrometer unit for finish of fire assay on some samples and for other tests as required.

SOCIOECONOMIC BACKGROUND OF AREA

There are no local establishments closer than the village of Carmacks, which is located 60 kilometers east of the mine on

highway No. 2 which leads to Whitehorse. Northward of Carmacks, the road leads to Dawson City and ultimately crosses into Alaska and joins the Fairbanks and/or Anchorage highway. Also, approximately at Carmacks, highway 4, which leads from Faro and the intersection at Ross River, joins highway 2. Highway 2, south of Whitehorse, intersects highway 1 at Carcross and leads to Skagway, an open water port in Alaska, which is the principal supply point for fuel and freight into Whitehorse and ultimately Carmacks and the Mount Nansen operation.

The village of Carmacks proper sits on the bank of the Yukon River with most of the service and commercial buildings on the south bank and the First Nations residential area and band office is on the north bank. The population of Carmacks is given as 489 people. An RCMP detachment is located in Carmacks, as is a nursing station which provides 24-hour service and an upgraded airport with cargo shelter is available. Carmacks is the home of a campus of the Yukon College. Approximate full-time employment provided by the village of Carmacks is 35 from private industry, 45 from Federal and Yukon governments, village of Carmacks is 6 and First Nations Band is 25, for a total of 111.

The mine area is currently held under license by a trapper. Harvesting information indicates only minimal returns with an average of 3.5 animals per year per license. It may be necessary, however, to come to accommodation with the current trapper. Further, mine personnel have negotiated with the First Nations Band with an intent to come to an agreement where participation in

employment, such as site supply, etc. and work at the operation would be afforded.

B.Y.G. PROJECTED MANPOWER SCHEDULE

Mount Nansen is expected by B.Y.G. to operate year-around. It is expected the open pit mining operation will only operate for seven months of the year with the mill continually operating with the winter months being supplied from stockpile. B.Y.G's manpower estimate is as follows:

<u>POSITION</u>	<u>YEAR ROUND</u>	<u>APRIL TO OCTOBER</u>
Equipment Operators	6	14
Mill Operators	12	12
Tradesman	6	10
Laborers, Trainees	6	8
Technical	5	9
Accounting, First Aid	4	4
Kitchen	4	4
Manager, Superintendents	3	4
TOTAL	46	65

EXPLORATION POTENTIAL

The possibility exists of discovery of other deposits similar to the planned Brown-McDade pit. Surface oxidation targets exist in several areas along the known trend. Geochemical anomalies are

known over a considerable area. A program of follow-up trenching and shallow drilling would be a logical step to explore for additional mill tonnage. When capital is available from the cash flow of the mining-milling program, such a program should be undertaken. With a plant in operation and paid for, any oxide discovery of over 50,000 tons averaging 5-plus grams of gold per ton gives a good return on invested capital.

Most of the known mineralized areas in the southern property were visited. A helicopter visit was planned for the northern "Tawa" property, but the weather was not favorable, so no visit was made to any of the Tawa property.

The Dickson and the Mill zone may host a small amount of open-pit tonnage. These sites will require tractor scraping to remove the shallow overburden. Drilling may be worthwhile at these areas also.

UNDERGROUND MINING

The capital generated by the planned surface mining will enhance the possibility of profitable underground exploration, development and mining. The mill will be available after milling the oxide surface ore to process other cyanide-compatible ores.

Mill capacity will be adequate to allow the mine or mines to operate and stockpile production during the winter for milling

during the summer months. The mine crew could be used to fill out a skeleton mill crew during a summer milling campaign.

The underground potential for the property was not covered in this report, as the surface potential is expected to be adequate to repay a \$7,000,000 Canadian-dollar loan.

The current underground Proven and Probable reserves are listed as:

Brown-McDade: (With 31% mining dilution.) Total Proven and Probable (all veins 183,843 metric tons @ 9.2 grams of gold per ton and 77.6 grams of silver per ton.

Webber: (Mining dilution minimum width of 1.22 meters.) Total Proven and Probable (all veins) 58,526 metric tons @ 10.6 grams of gold per ton and 599.9 grams of silver per ton.

Heustis: (Will require flotation section in the mill for good recovery. Dilution calculation is the same 1.22 meters minimum as used in the Webber.) Total Proven and Probable (all veins) 85,730 metric tons @ 14.0 grams of gold per ton and 283.1 grams of silver per ton.

ECONOMICS OF OXIDE MINING AND PROCESSING
OF THE BROWN-McDADE OPEN PIT

All Calculations are in Metric Tons

Total mining reserve of 194,116 metric tons @ 7.2 grams gold and 70 grams silver. Strip ratio of 4.07 to 1.

Gold Production

194,116 metric tons x 7.2 grams gold x 0.03215 = 44,934 oz. contained at this head. Recovery is expected to be 85.5% or above. Recovery of 38,418 ounces of gold should be expected.

Silver Production

194,116 metric tons x 70 grams silver = 13,588,120 grams x 0.03215 = 436,858 ounces of silver contained. At 50% recovery, this would yield 218,429 ounces of silver.

Oxide reserves calculations were spot-checked with Dave Melling at the B.Y.G. office in Port Moody, B.C. on September the 1st.

Gold production = 38,418 ounces. Silver production = 218,429 ounces. At \$385.00 gold (U.S. \$) and \$5.00 silver (U.S. \$), the Brown-McDade oxide production would yield:

$$38,418 \times \$385.00 = \$14,791,930$$

$$218,429 \times \$5.00 = \underline{1,092,145}$$

$$\$15,884,075$$

U.S. dollar value/metric ton would be $\$15,884,075 \div 194,116 =$
 $\$81.82/\text{metric ton}.$

Contract mining cost, even on the high side, should not exceed
 $\$1.50/\text{ton}$ of ore ripped, loaded and hauled the one kilometer to the
 mill. Waste should be $\$1.50/\text{ton}$ to drill, blast, load and haul to
 the waste pile $\times 4.07$ tons of waste/metric ton of ore = $\$6.10.$

Ore = $\$1.50/\text{metric ton}$

Waste = $\underline{6.10}/\text{metric ton}$

7.60^* (*if done by a contractor, add 20%)

$\underline{1.52}$ Contactor's profit

$\$9.12/\text{metric ton}$ - Canadian \$

Cost/Metric Ton (Canadian \$)

<u>WMC, Inc.</u>		<u>B.Y.G.</u>
\$9.12	Contract Mining	\$11.11
1.96	General Expense	2.68
17.61	Mill Operation	24.81
2.61	Plant Overhead	5.91
2.50	Administration	2.87
<u>2.45</u>	Royalties	<u>3.08</u>
\$36.25		\$50.46

WMC, Inc. Estimate Based on Varied Milling Rate

<u>350 MT/Day</u>	<u>500 MT/Day</u>	<u>700 MT/Day</u>	<u>1,000 MT/Day</u>
\$24.15	\$20.72	\$17.61	\$15.16
<u>18.64</u>	<u>18.64</u>	<u>18.64</u>	<u>18.64</u>
\$42.79	\$39.36	\$36.25	\$33.80

Brown-McDade Oxide Pit

For Comparative Purposes

WMC, Inc. - 700 MT/Day Cost = \$36.25 Note: B.Y.G. Cost = \$50.46

194,116 x \$36.25 = \$ 7,036,705

Total Mill Cost = 5,009,700

Total Tailing Pond Cost = 600,000

\$12,646,405

\$12,646,405 x 0.71 (U.S. conversion) = \$8,978,947 (U.S. \$)

U.S. Dollar Recovered Value \$15,884,075 - "Cost" \$8,978,947 =
\$6,905,127 (1)

- (1) This is not a true total cost as depreciation, depletion, taxes, cost of finance, corporate overhead and probably other miscellaneous costs are not included -- it was done to show the results of milling at 700 metric tons per day for 277 days (8 months) -- which would exhaust the oxide high-grade ore.

Some of the oxide ore is quite friable and may allow the cyanide section to treat up to 1,200 tons per day. At the

1,200 metric tons per day rate, the pit could be mined in 162 days, or 5.3 months. Somewhere between the 700 metric tons per day (8 months) and a 1,200 metric tons per day rate is the optimum rate.

ECONOMICS OF TAILINGS AND DUMPS

40,000 tons recoverable @ 5 grams gold and 85% recovery and 80 grams silver and 50% recovery.

Gold

$40,000 \times 5 \text{ grams/metric ton} \times 85\% \text{ recovery} \times 0.03215 = 5,465$ ounces of gold recoverable.

$5,465 \times \$385.00 \text{ US/ounce gold} = \$2,104,217$

Silver

$40,000 \times 80 \text{ grams} \times 50\% \text{ recovery} \times 0.03215 = 51,440$ ounces of silver

$51,440 \times \$5.00 \text{ US/ounce silver} = \$257,200$

Gold \$2,104,217 + silver \$257,200 = \$2,361,417

U.S. dollar value/metric ton would be $2,361,417 \div 40,000 = \59.03

Loading and hauling would be about \$2.50/metric ton (Canadian)

\$ 2.50 loading and hauling

17.61 milling @ 700 metric tons per day

1.96 general expense

2.61 plant overhead

2.50 administration

1.77 royalties

\$28.95/metric ton (Canadian)

40,000 metric tons x \$28.95 (Canadian) = \$1,158,000 x 0.71 exchange
rate = \$822,180 U.S. dollars

Recovered value = \$2,361,417 - \$822,180 = \$1,539,237 (U.S. \$).
This is on the same basis and comment as the oxide pit calculations
and note (1) on page 41.

CURRENT ECONOMICS OF THE FLEX ZONE

50,000 metric tons - For this calculation an assumed value of
6 grams gold and 144 grams of silver with a gold recovery of 75%
and a silver recovery of 50%.

Gold

50,000 metric tons x 6 grams x 75% recovery x 0.032150 = 7,233
ounces x \$385.00 = \$2,784,993 (U.S. \$).

Silver

50,000 x 144 grams x 50% recovery x 0.032150 = 115,740 ounces
 x \$5.00 = \$578,700 (U.S. \$).

Flex Zone Recovered Value

\$2,784,993 (gold) + 578,700 (silver) = \$3,363,693 total recovered
 value (U.S. \$)

Value = \$67.27/metric ton

Stripping is estimated at 4 to 1, but may be cheaper to
 accomplish as much of the overburden can be dozer pushed downhill.

\$1.50 x 4 = \$ 6.00/metric ton - Stripping

\$1.75 x 1 = 1.75/metric ton - Load, blast and haul

7.75

1.55 Contractor's profit

9.30/metric ton - Mining

1.96/metric ton - General expense

17.61/metric ton - Mill operation

2.61/metric ton - Plant overhead

2.50/metric ton - Administration

2.01/metric ton - Royalty

Cost = \$35.99 Canadian dollars per metric ton

$\$35.99 \times 50,000 \text{ metric tons} = \$1,799,500 \times 0.71 \text{ conversion}$
rate = \$1,277,645 (cost)

Values = \$3,363,693 recovered value
- 1,277,645 mining, milling and associated costs
 (same as note 1, page 41)
 \$2,086,048

VALUE RECAP

After Operating Costs Deducted Per Note (1), Page 2

1. Oxide Brown-McDade =	\$6,905,127
2. Dumps and tailings =	1,539,237
3. Flex Zone (assumed lower value) =	<u>2,086,048</u>
	\$10,530,412

Thus, after paying for the mill construction and the tailings impoundment, by milling 284,116 metric tons in 406 days, or 1.11 years prior to the deductions in (1), \$10,530,412 U.S. dollars would remain.

Dumps and Tailings

Dumps and tailings were sampled by Archer Cathro and Associates (consultants). They took 96 samples from a composite volume of 33,459 M³ @ 2.56 S.G. (T/M³). This was for 68,038 metric tons, i.e., one sample for each 348 M³, or 708 tons. Thus, 68,038 metric tons (probable classification) are stated to exist grading 5.1 grams gold and 124.6 grams silver.

Archer Cathro's work and later work shows that 43,184 tons of tailings and dumps are available with a grade of 5.4 grams gold and an indicated recovery rate of 90.29%. Silver calculates at 85.85 grams and the recovery factor is 57.03%.

The above does not include the Heustis Upper Portal @ 17,999 metric tons @ 3 grams gold and 73.4 grams of silver. The Heustis Lower Portal has 6,855 tons @ 4.9 grams of gold per ton and 96.2 grams silver per ton. Unfortunately, only 32.2% of the gold and 40% of the silver is liberated by cyanidation. Heustis tonnage has not been used in any of the calculations.

Other Movable Reserves

As shown above, tailings and dumps are shown by B.Y.G. to amount of 68,038 metric tons at 5.1 grams of gold per metric ton and 125 grams of silver per metric ton. Overall recovery as determined from samples of the dumps and tailings is expected to be 90.29% of the gold and 57.03% of the silver.

The Flex deposit is not fully drilled out, nor has a full pit layout been completed.

In excess of 50,000 metric tons grading 7.4 grams of gold and 178 grams of silver with a recovery of 79.9% gold and 62.6% silver may be possible at the Flex deposit.

Some value must be assigned to the Flex deposit for its economic impact. Drilling next spring should complete the information necessary in order to make an engineer determination of tons, strip ratio, etc. Currently, the Flex deposit is listed by B.Y.G. at 62,526 metric tons at 7.4 grams gold, with 79.9% recovery, and 178 grams silver, with 62.6% recovery.

For this study, I have arbitrarily reduced the grade of gold to 6 grams and silver to 144 grams. Recovery used is 75% of the gold and 55% of the silver.

CONCLUSION

The project is located in the Yukon Territory which has severe weather, difficult transportation and sparse population. It is located in an area that has been placer mined, underground mined, trenched on the surface and, in general, is looked upon as an area suitable for mining. The workers I observed are skilled and willing to work.

The current surface plant is being, or can be, updated to place an approximately 700-ton-per-day cyanide plant in operation for about \$7,000,000 (Canadian) This does not include management and fringe costs, nor other costs such as exist at all new plants.

If management sets a reasonable production schedule, funds it adequately and keeps competent operation people on site and lets them remain in charge of the project, at \$385.00 (U.S.) gold and \$5.00 (U.S.) silver, it should be very profitable.

RECOMMENDATION

This project is feasible and could be financed at the \$7,000,000-\$8,000,000 Canadian requested with a better than normal expectation of the loan being repaid. I recommend making the requested loan subject to B.Y.G. Natural Resources being required, as a condition of the loan, to meet a stringent, though reasonable, set of commitments regarding construction, expenditures, mining and milling cost goals. Gerald should receive normal management reports such as they may request.

Mill construction and the initial open-pit and dump mining and milling will all take place over a short time period. Gerald should retain some form of oversight, just short of creating a management liability, in order to demand change or concessions if time and/or cost or production estimates are not met.

I believe this can be a good project if properly pursued. If you can secure the terms and conditions you desire, I recommend you make the requested loan.

Very truly yours,

W. M. CALHOUN, INC.

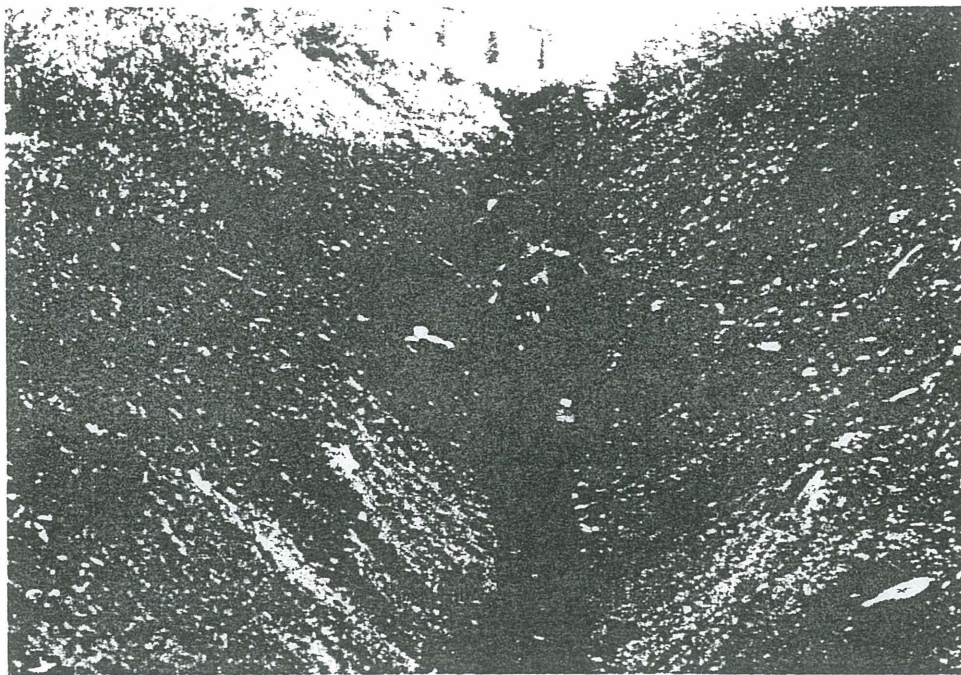
A handwritten signature in cursive script, appearing to read "W. M. Calhoun", written in dark ink.

W. M. Calhoun, President

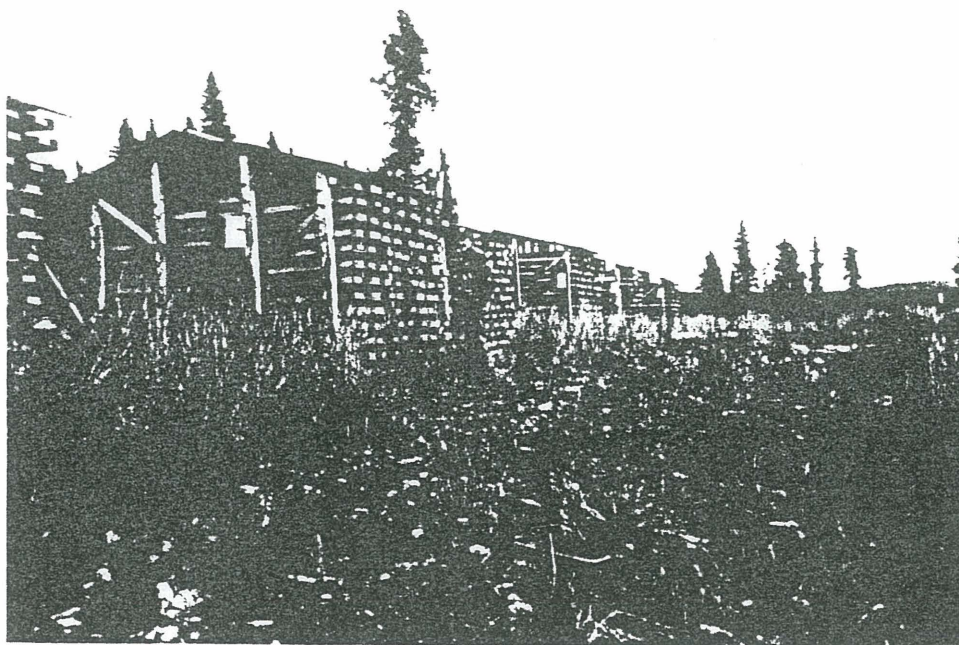
WMC:skp

Attachments

September 23, 1995



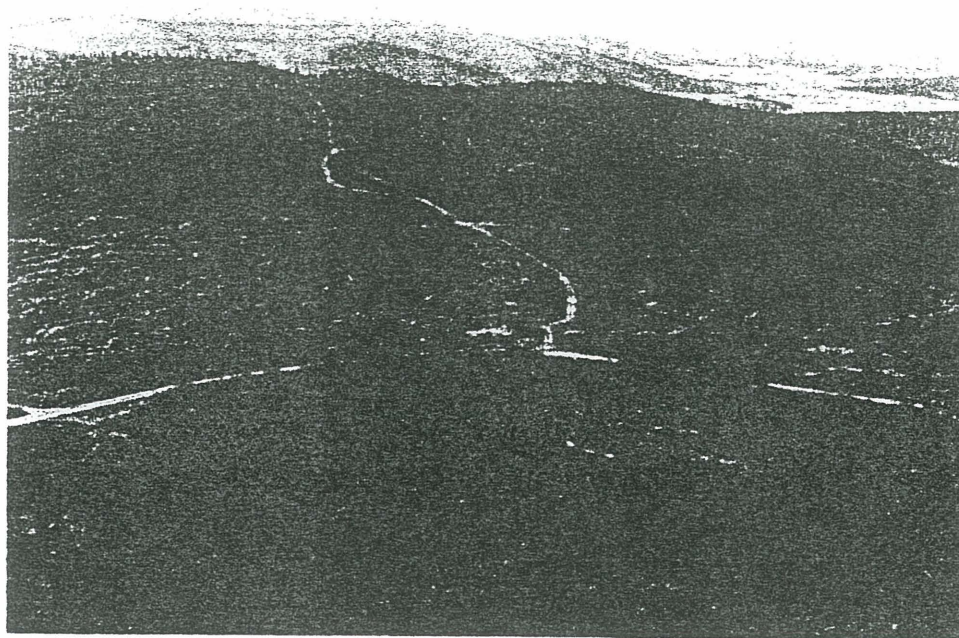
Exploration dozer trench at the Flex Zone. William Mann, consulting geologist, is shown holding a clay "mud" ball made from weathered zone in the ore.



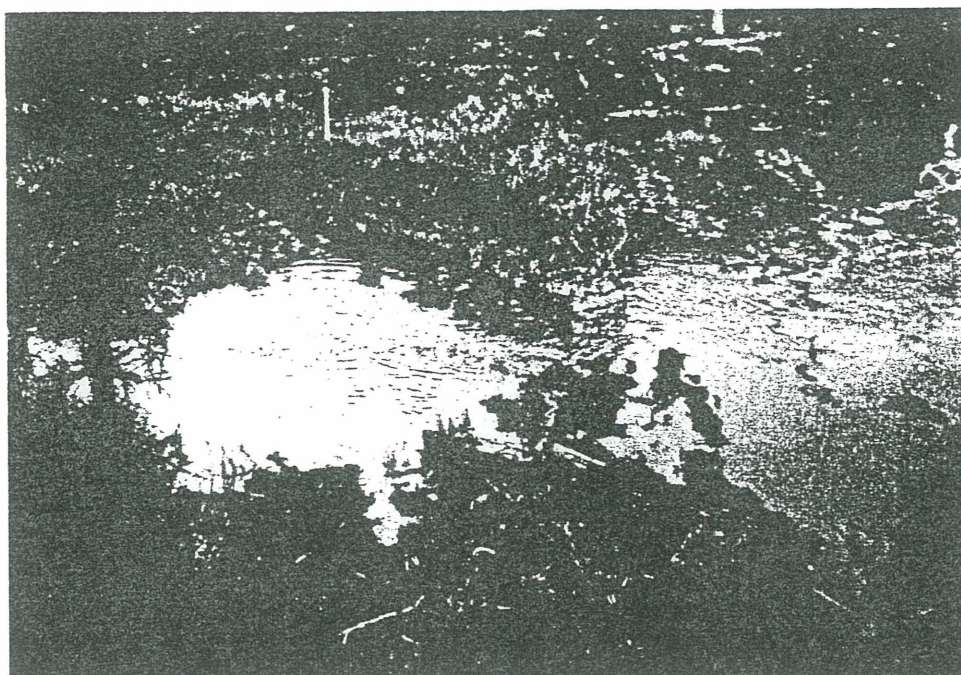
Diamond drill core storage



Brown-McDade adit portal. A down-grade ramp could be started in this area to mine below the planned oxide pit.



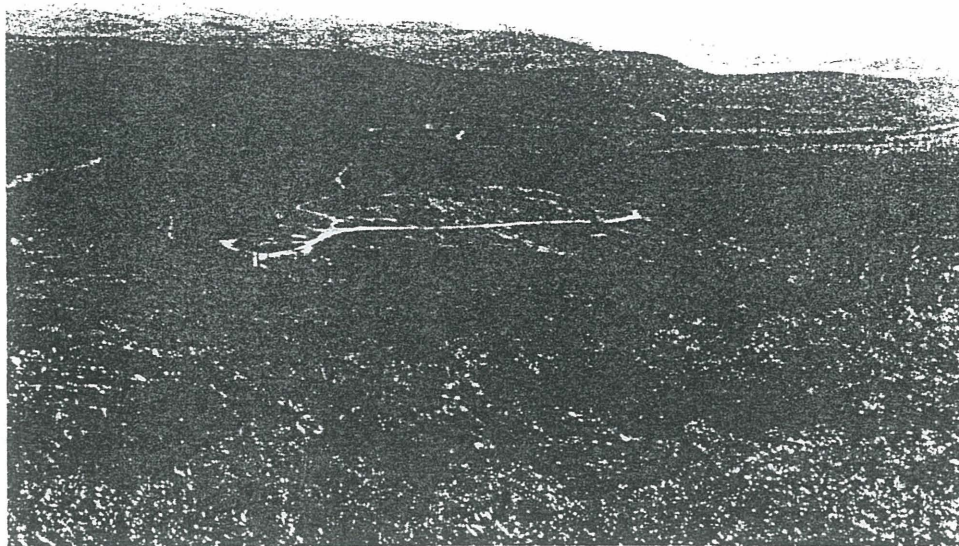
Spud Zone surface trenching. Natural vegetation (dark green) grows along dozer trenches.



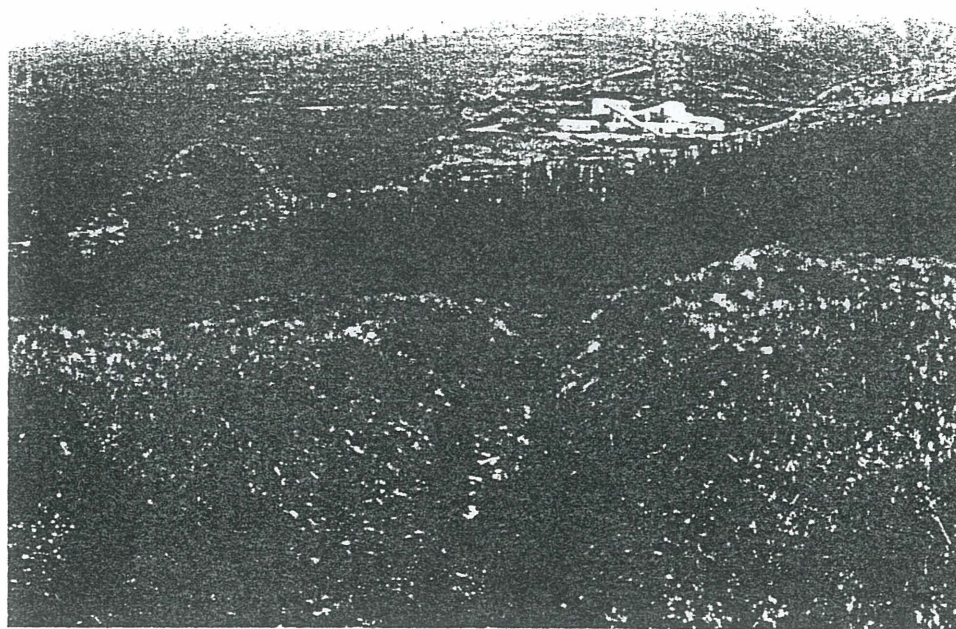
Centerline of Dome Creek, site of future tailings impoundment. This is an above-normal high-water flow.



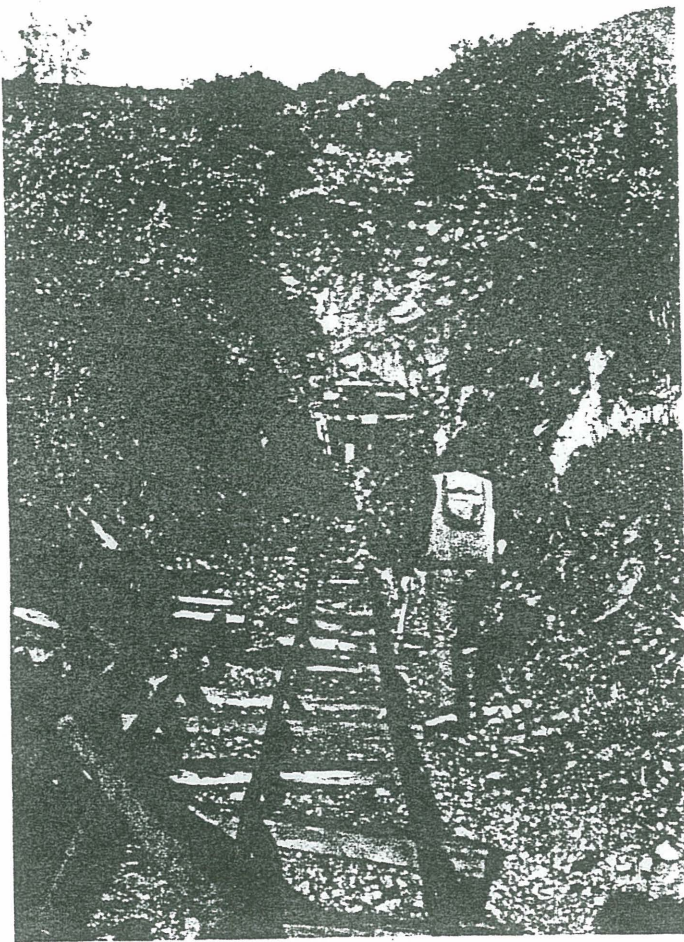
Borrow pit for tailings impoundment structure. This sandy material is the wind-blown separation left over following the dry period after the last glacial event.



Brown-McDade oxide pit area - Center of picture.



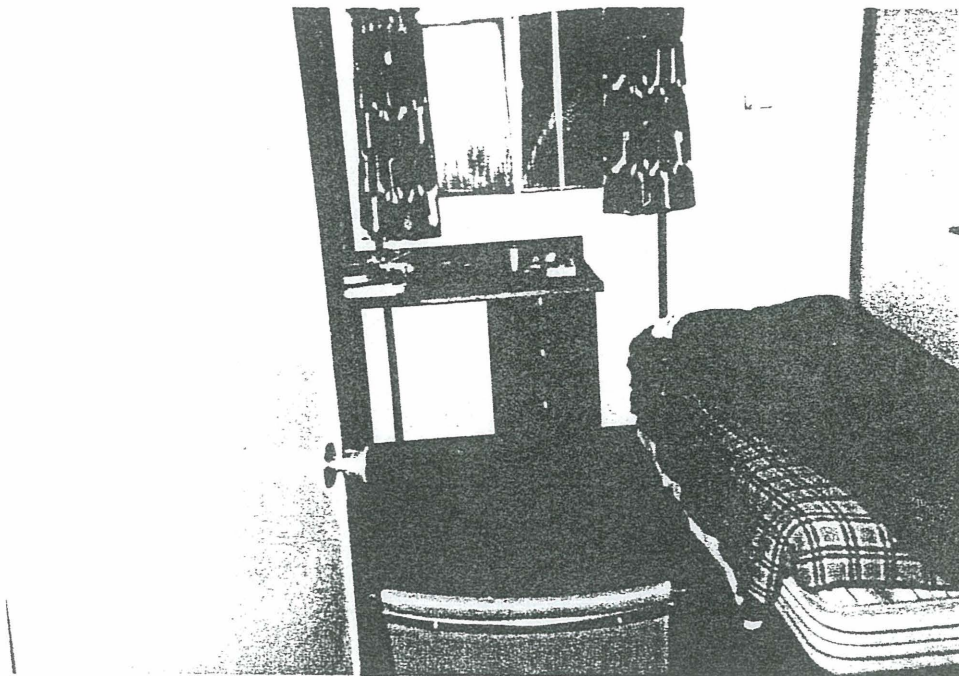
Mill buildings with exploration trenches showing as green lines in back of the mill. The picture was taken looking down a dozer exploration trench at the Brown-McDade pit location.



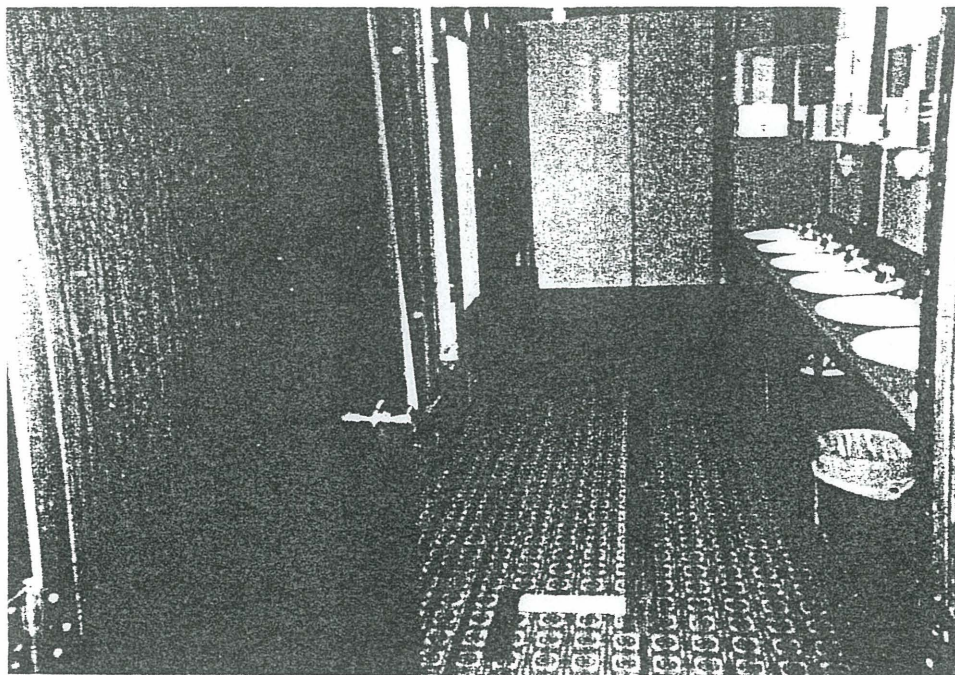
Heustis Upper Level portal.



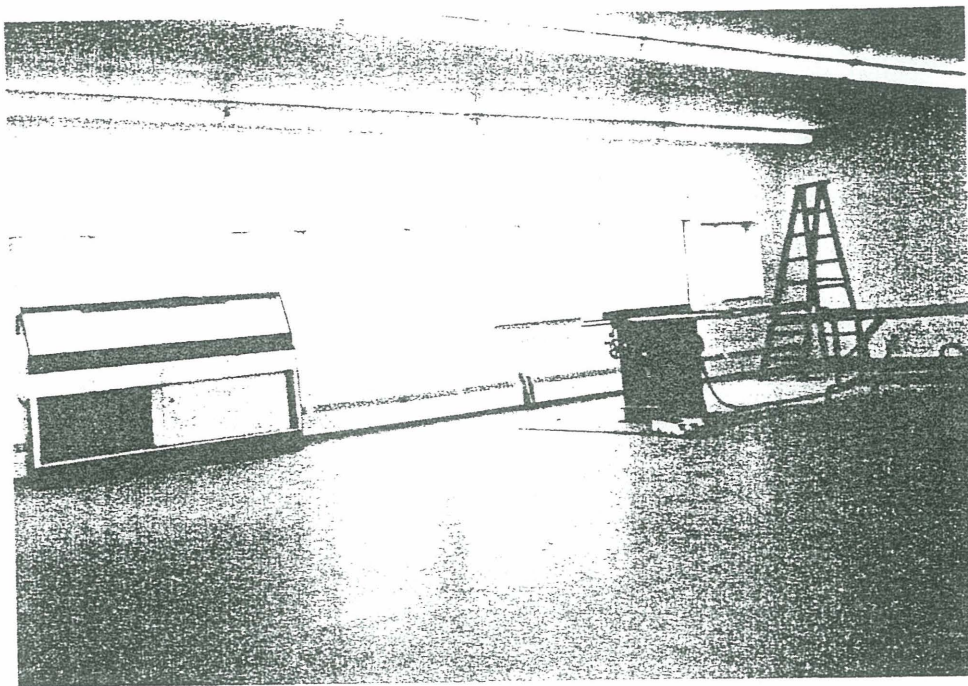
Mount Nansen camp as seen from Heustis Upper Portal. White trailers are the bunkhouse. Building below bunkhouse is the nearly-recompleted mess hall. Lower building is the main office, first aid, staff quarters and lounge area.



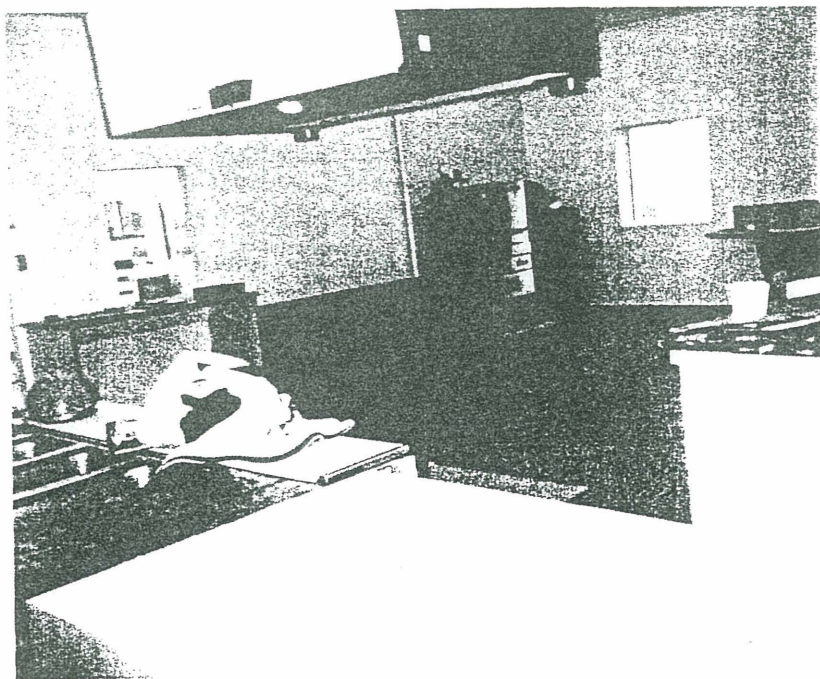
Portable bunkhouse individual room.



Bunkhouse rest room and showers.



Mess hall "dining" area near completion.



Part of kitchen -- installation of stoves, dishwasher, refrigeration, etc. nearly complete.

ESTIMATED B.Y.G. MILL OPERATING COSTS*

<u>Item</u>	<u>CANADIAN \$/METRIC TON MILLED</u>			
	<u>MTPD Average Rate - 365 D/YR</u>			
	350	500	700	1,000
Labor and supervision @ average \$65,000 per annum loaded rate				
- 18	\$ 9.15			
- 21		\$ 7.47		
- 23			\$ 5.85	
- 26				\$ 4.63
Power	5.99	5.24	4.46	3.73
Reagents	5.01	5.01	4.80	4.80
Op. and repairs supplies	<u>4.00</u>	<u>3.00</u>	<u>2.50</u>	<u>2.00</u>
TOTAL	\$24.15	\$20.72	\$17.61	\$15.16

*Estimated by Michael Ross, Metallurgist and President of Orocon, who will probably be the mill contractor. His firm has specialized in gold mill construction in the Northwest Territories, Yukon and remote areas of British Columbia.

ITEMIZED B.Y.G. MILL LABOR, REAGENTS,
STEEL AND POWER (*)

	<u>Metric Tons Per Day</u>			
	<u>350</u>	<u>500</u>	<u>700</u>	<u>1,000</u>
Mill Operators	1	2	3	4
CN/Gr. Operators	4	4	4	4
Helper	4	4	4	4
Mech./Elec.	3	4	5	6
Laborer/reag/spore	2	3	3	4
Assay	2	2	2	2
Mill foremen/refin	1	1	1	1
Mill supt.	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
	18	21	23	26

		<u>Can. \$/ Cost Per Metric Ton @ Various Rates</u>			
<u>Reagents</u>	<u>Unit</u>	<u>350</u>	<u>500</u>	<u>700</u>	<u>1,000</u>
Steel	0.60	2.00	1.20	1.80	1.08
Flocc	2.00	0.08	0.16	0.05	0.10
Lime	0.17	4.00	0.68	4.00	0.68
NacN	1.20	2.10	2.52	2.10	2.52
Carbon	1.30	0.08	0.10	0.06	0.08
NaOH	0.70	0.05	0.03	0.03	0.02
Flux	0.50	0.03	0.02	0.03	0.02
HCl	0.10	0.10	0.01	0.08	0.01
SO ₂	0.18	1.60	<u>0.29</u>	1.60	<u>0.29</u>
225+ = 140 KW			5.01		4.80

<u>Power</u>	<u>350</u>	<u>500</u>	<u>700</u>	<u>1,000</u>
KW	760	950	1,150	1,350
¢/KW hr. - 11.5¢				
\$/T	\$5.99	\$5.24	\$4.46	\$3.73

*Estimated by Michael Ross

PROCESS DESIGN CRITERIA

1. OXIDE ORE

2. ORE CHARACTERISTICS

Run-of-mine ore size, % passing 12 inches	98
Run-of-mine ore moisture %	3
Specific gravity	2.7*
Bulk density, lbs/ft ³	100*

*assumed, measured SG value of Composite A was 2.64

3. PRODUCTION CRITERIA

Design throughput capacity - tonnes/hour	31.25
- tonnes/day	750
Average production rate - tonnes/day	700
- tonnes/year	255,000
Operating days per year	365
Operating hours per year	7,884
Net % plant availability	93
Typical ore feed grade - Au oz/ton	0.22
- Ag oz/ton	2.0
Annual gold recovery (based on 0.22 oz/ton Au head), %	85.5
Average gold production - oz	48,060
Average silver recovery (based on 2.0 oz ton Ag head), %	50.0
Annual silver production - oz	255,500

4. ORE STORAGE

Open pit stockpile capacity, tons

5. GRINDING

Ore feed rate tons/hour - No. 1 mill	31.25
Ore feed size - % passing 12.7 mm (1/2")	80
Product size - % passing 100 micron (150 mesh)	80
- % passing 74 micron (200 mesh)	70
Bond work index	16.0
Req. grinding HP	671
Ball consumption, lbs/ton	1
Liner consumption, lbs/ton	0.5
Fine ore capacity, tons/bin	250
Thickener unit area, ft ² /TPD	4.2
Thickener underflow density, % solids	42-45
Flocculant addition, lbs/ton	0.08

6. CYANIDATION (CIL)

pH	10.5-11
Lime (95% CaO) consumption, lbs/ton	4.0
Cyanide concentration, g NaCN/L	0.4 to 0.2
Sodium Cyanide addition, lbs/ton	2.1
Retention time, hours	24
Number of stages (CIL)	6
Anticipated residue grade - Au, oz/ton	0.03
- Ag, oz/ton	1.0
Gold extraction, %	86.4
(based on 0.22 oz/ton Au head)	
Silver extraction, %	60
(based on 2.0 oz/ton Ag head)	
Retention time per stage, hours	4
Average carbon pulp loading, g/L	20-25
Average carbon loading - Au, oz/ton	50
- Ag, oz/ton	200
Carbon fine loss, lbs/ton	0.07-0.1
Carbon size, mesh	6x12
Carbon safety screen size, mesh	35
Carbon launder screen size, mesh	20
Gold adsorption efficiency, %	99
Silver adsorption efficiency, %	83

7. CARBON DESORPTION AND ELECTROWINNING

Operation - hours/day	24
- days/week	7
Carbon transfer rate, tonnes/day	4.0
Stripping temperature, °F	200
Barren strip solution design flow, USGPM	10
Barren strip bleed, %	15
Strip solution - g NaCN/L	3
- g NaOH/L	10
Carbon loading - initial loading - Au, oz/ton	50
- Ag, oz/ton	250
- final loading - Au, oz/ton	3-4
- Ag, oz/ton	15-20
Carbon bulk density - lbs/ft ³ dry	37
- lbs/ft ³ wet	55
- lbs/ft ³ flooded	80
Caustic soda consumption, lbs/ton	0.3

8. BULLION PRODUCTION

Refinery operation, days/week	2
Charges/week	2
Flux mixture, % - Niter	40-50
- Silica	30-25
- Borax	30-25

9. CARBON HANDLING

Acid wash frequency	every third batch
Acid concentration, % HCl	5-10
Acid consumption, lbs/ton	0.4
Acid and caustic flowrate, USGPM	20
Sizing screen, mesh	20

10. TAILINGS TREATMENT

Cyanide concentration in untreated tailings, g CNp/L	0.11
SO ₂ /CN _T ratio	4/1
Air flow, CFM	300
Retention time, hours	1
pH	8.5
Lime consumption, lbs/ton	NIL
Copper sulfate addition, mg Cu ²⁺ /L	NIL
Total tailings solids - tons/hour	31.25
Tailings discharge density, % solids	39

11. REAGENTS

Cyanide

Consumption - lbs/ton	2.2
Solution concentration, %	15

Lime

Type	quick lime
Bulk density, lbs/ft ³	35
% CaO	95
Consumption, lbs/ton	5.3

Flocculant

Type	Percol 351 or equivalent
Consumption, lbs/ton	0.08
Solution concentration, %	0.01

Sodium Hydroxide

Consumption, lbs/ton	0.3
Addition method	direct

Hydrochloric Acid

Strength, % HCl	31.5
Acid wash strength, % HCl	5
Consumption, lbs/ton	0.4

Sulphur Dioxide

Consumption, lbs/ton	1.6
----------------------	-----

Carbon

Mesh size

6x12

Type

medium activity

Consumption, lbs/ton

0.07 - 0.1

Fluxes

Mixture, % - Niter

20

- Silica

5

- Borax

60

- Soda Ash

15

QUOTATION

The following is a revised bid submitted by Orocon Inc., Michael J. Ross, President.

Note: All funds are in Canadian Funds.

To supply and install all equipment required for an expansion and conversion of the BYG Mount Nansen Mill to a 700 metric tons per day average processing rate Carbon in Leach Mill.

Target Price. \$5,069,700 Canadian Funds
 exclusive of GST

Specifically excluded from the scope of work is:

1. The supply and installation of a 35 man camp for construction and the cost of operating the camp (i.e. room and board). A total of approximately 3,200 manshifts is projected for construction.
2. The power plant and main feeder cables to the mill master control consoles.
3. Heat recovery system for the mill (estimated \$30,000).
4. Main water supply - assuming an 80% recycle from the tails dam, fresh water needed will average about 45 USGPM.
5. Reagent inventory estimated at \$226,000.

Lime:	8,000
Cyanide:	48,000
Steel Balls. - 40t	20,000
Carbon:	140,000
<u>Misc. reagents:</u>	<u>10,000</u>

TOTAL: \$ 226,000 Canadian Dollars

6. Spare parts - some spare parts will be supplied with the mill equipment installed - estimate the extra requirement at \$75,000.
 7. Assay office.
 8. Stand-by generator (for construction also).
 9. Repair to coarse bin foundation.
- N.B. Plant capacity limitation will be the crushing plant. A run-of-mine ore containing lots of fines (-1/2") and well-fractured should achieve a 50 to 60 tonne/hr. crushing rate to produce product.

BYG 700 MTPD MILL CONVERSION
COST SUMMARY

<u>Item</u>	<u>\$ 000's</u>
Equipment	2,206,000
Labour - 3,025 manshifts: 6 - 10 hr. shifts per week @ \$310/manshift	937,750
Winter labour productivity factor (20%)	187,550
Mobilization and demobilization, employee transportation	50,000
Transportation - equipment and material (less ball mill and CIL tanks)	180,000
Site and yard preparation cleanup and unloading labour	30,000
Equipment rentals	140,000
Consumables	65,000
Site supervision	140,000
Concrete, excavation and demolition - 360 yds. @ 900/yd assuming gravel available	<u>324,000</u>
Subtotal	4,260,300
Contractor Administration @ 4%	170,400
Contractor Profit - 15%	<u>639,050</u>
TOTAL	5,069,700
Target price - \$5,069,700 incl. 10% fixed and 5% variable fee Bonus fee - 5%	

EQUIPMENT LIST - 700 MTPD - C.I.P. MILL

Qty.	Description	Basis	Installation manshifts	Equipment Cost 000's	Motor HP
Lot	Install grizzly (13" slot opening) & coarse ore bin (75t) & supports, 25' Forano apron feeder	new	50	55	10
Lot	Ramp	new	50	15	--
1	Rock Hammer	used	20	40	5
1	C.O. bin u/s conveyor - 36" w. x 100' long incl. supports, disch. arrangement	used/ exist	65	35	25
Lot	Overhaul crushing plant & ready for operation incl. electrical equipment & labour	new/ used	160	40	200 exist
1	Dust collector & ducting & screw conveyor (dry baghouse)	new/ used	35	20	10
Lot	Install 2 slot feeders on fine ore bins & transfer belt (conv. #9)	new	70	40	5+5+3
1	9'x11' Hardinge Ball Mill to replace #1 ball mill - incl. ball charge & transportation	used	420	251	500
1	Compressor for BM clutch	new	2	5	5
2	15" cyclones & launders	used	20	15	--
2	Belt scales	new	15	18	--
1	35' dia. Hi Rate Thickener & supports (Enviroclear), incl. transport	used	100	105	3+7.5
6	20' dia. x 23'6" high leach tanks - located inside incl. baffles & bridges, Kambalda screens, launders	used	300	220	--
6	Agitators for above tanks incl. some new prop. blades	used	60	5	6@15

EQUIPMENT LIST - 700 MTPD - C.I.P. MILL

Qty.	Description	Basis	Installation manshifts	Equipment Cost 000's	Motor HP
1	L.P. Blower, 1,000 CFM @ 15.0 psig, outside in enclosure	new	20	25	100
Lot	Pump boxes, distributors, launders & existing tank modifications	new/ exist	40	20	--
16	Process pumps incl. steel bases (see list)	new/ used	80	30	105
1	Tyler Tyspeed trash screen - 4'x 8' incl. supports etc.	used	10	5	5
2	Tyler Tyspeed screens - 2'x 6' screens - decks 20 & 35 mesh. c/w support frame & U/S chutes	used	20	8	--
1	Tyler 2'x 4' loaded carbon screen	used	10	4	3
1	Horizontal carbon regeneration furnace, custom equipment, 70 lb/hr capacity incl. feed & disch. hoppers	used	60	65	2 propane
2	15 cathode electrolytic cells HBS c/w rectifier & electrics incl. ventilation	new	25	50	10DC
1	Cathode preparation table	new/ used	15	6	--
1	Electric eluate heater - 50 KW Chromalox type NWH-JR (boiler?)	new	5	9	67
2	Eluate heaters - 10KW + 20 KW	new/ used	5	4	27

EQUIPMENT LIST - 700 MTPD - C.I.P. MILL

Qty.	Description	Basis	Installation manshifts	Equipment Cost 000's	Motor HP
Lot	Refinery equipment incl. manual tilting propane fired crucible type furnace, slag & bullion moulds, fan (5,000 CFM), security encl., (expanded metal), hoods	new/ used	45	45	5
1	Carbon holding bin	used	5	2	--
Lot	CIP process piping for stripping, acid washing, electrowinning sections, incl. valves & eductors	new	120	30	--
Lot	Other process piping & valves incl. tails line (uninsulated)	new/ used	220	110	--
1	40 tonne lime silo & screw feeder incl. transport	used	30	10	1
Lot	Structural steel stairs, platforms, etc.	new/ used	140	120	--
Lot	Electrical equipment, starters, disconnects, cable, pushbuttons, 2 control panels, basic instrumentation	new/ used	320	280	20HP lighting
Lot	MCC's, lunchroom, mill laboratory	new	60	18	--
1	Eductor water tank	exist/ modify	8	1	--
Lot	Mill laboratory equipment (see list)	new/ used	10	15	--
1	Carbon acid treatment tank - 5'6" x 17' stainless steel/FRP	new	3	15	--

EQUIPMENT LIST - 700 MTPD - C.I.P. MILL

Qty.	Description	Basis	Installation manshifts	Equipment Cost 000's	Motor HP
2	Carbon stripping columns - 5'6" dia. x 17' high, mild steel, insulated, incl. screens	new	30	25	--
1	Barren electrolyte holding & heater tank - 10' dia. x 8' high (mild steel, insulated) - possible thickener use	used	15	8	--
Lot *	Reagent mixing feeding equipment, incl. tanks, mixers, piping & pumps	new/ used	40	12	5
1	Sodium cyanide mixing & feed system using 2 ton sodium cyanide containers incl. circulating pump	new/ used tank	12	18	5
Lot	Painting	--	30	5	--
Lot	Building modifications	--	50	5	--
Lot	Mill tools (see partial list)	used for construction	--	40	--
Lot	Engineering & procurement & on site engineering - approx. 50 drawings - incl. travel & other expenses	--	--	160	--
1	Reaction tank - 14' x 14' for SO ₂ /air cyanide destruction, incl. agitators	new	30	40	1@20
1	SO ₂ storage tank (rail car) incl. transp.	used	25	20	--
Lot	SO ₂ piping, valves, instrumentation, drier	new/ used	40	30	--
1	Shop compressor - 120 CFM @ 100 psig	new	5	17	25

EQUIPMENT LIST - 700 MTPD - C.I.P. MILL

Qty.	Description	Basis	Installation manshifts	Equipment Cost 000's	Motor HP
Lot	Tailing water reclaim system incl. pole line - allowance	new	100	85	75
Lot	Process, fresh, reclaim water systems	exist/ modify	30	5	--
	TOTAL		3,025	2,206	1,343

Flocculant (for Thickener)
Acid for carbon acid wash
Acid wash system
Lime system for cyanide destruction
Sodium hydroxide

PUMP SCHEDULE

Note: Schedule is based on A-C/SALA pumps

Item	Qty	Size	USGPM	TDH	Oper HP	Wet End	Description
1	2	5x4	428	55	25	rubber	Primary cyclone feed pump
2	1	4x3	260	35	10	rubber	Thickener bypass pump
3	1	5x4	241	40	10	rubber	Thickener U/F pump
4	1	2"	75	120	10	steel	Eductor water pump
5	1	2"	100	20	7.5	VASA-G	Grinding area sump pump
6	1	2"	100	40	7.5	VASA-G	Leach/thickener area sump pump
7	1	1"	50	25	5	VASA-G	Carbon area sump pump
8	1	2x1	150	170	15	CSO	Process & gland water pump
9	2	2x1	250	60	10.0	CSO	Grinding water pump
10	1	1"	-	20	2	VASA-G	Acid area sump pump
11	2+1	-	10	30	1	magnetic	Eluate pumps
12	1+1	-	10	30	<u>0.5</u>	magnetic	Acid pump
TOTAL		16			105		

REAGENT PUMPS

Quantity	Description
3	Cyanide metering pumps - pulsafeeder
1	Flocculant Metering Pump
1	Sodium Cyanide Pump (magnetic)

Mt. Nansen property claim status .

Claim Name	Claim #	Grant #	Expiry	Lease	Owner	Owned
Rose		4241	98.10.09	Y	BYG	100%
Old Timer		4242	14.10.23	Y	BYG	100%
Golden Eagle		4278	98.10.09	Y	BYG	100%
War Eagle		4279	98.10.09	Y	BYG	100%
Glouser		4324	14.10.23	Y	BYG	100%
Big Thing		4329	14.10.23	Y	BYG	100%
Amalee		4351	95.03.18	Y	BYG	100%
Shamrock		4354	98.10.09	Y	BYG	100%
Nansen		4359	98.10.09	Y	BYG	100%
Buster		4360	14.10.23	Y	BYG	100%
Spot		4361	98.10.09	Y	BYG	100%
Clarence		4363	98.10.09	Y	BYG	100%
Rex		4366	14.10.23	Y	BYG	100%
Senorita		4367	95.03.18	Y	BYG	100%
Areip		4368	98.10.09	Y	BYG	100%
Phyllis		4369	98.10.09	Y	BYG	100%
Lucky Thing		4372	98.10.09	Y	BYG	100%
Bluebell		39191	98.10.09	Y	BYG	100%
Queen		55620	95.03.18	Y	BYG	100%
Leroi		55621	95.03.18	Y	BYG	100%
Duke		55625	95.03.18	Y	BYG	100%
Rub		55633	98.10.09	Y	BYG	100%
Tub		55634	14.10.23	Y	BYG	100%
Pub		55663	98.10.09	Y	BYG	100%
Sun Dog		55665	98.10.09	Y	BYG	100%
Cub		55666	98.10.09	Y	BYG	100%
Buck		55667	14.10.23	Y	BYG	100%
Hope		55795	95.03.18	Y	BYG	100%
Jam		55890	98.10.09	Y	BYG	100%
Pam		55892	98.10.09	Y	BYG	100%
Dome	1-7	73537-73543	98.02.06		BYG	100%
Dome	8-18	73694-73704	99.02.06		BYG	100%
Dome	19	73705	99.02.06		BYG	100%
Dome	20-22	73706-73708	99.02.06		BYG	100%
Dome	25-28	77746-77749	98.02.06		BYG	100%
Dome	33-43	77754-77764	98.02.06		BYG	100%
Dome	47-66	77768-77787	98.02.06		BYG	100%
Dome	78-84	81842-81848	01.02.06		BYG	100%
Dome	86	81850	01.02.06		BYG	100%
Jeff	1-5	77798-77802	98.02.06		BYG	100%
Jeff	7	77804	98.02.06		BYG	100%
Joanne	1-6	74283-74288	99.02.06		BYG	100%

Mt Nansen property claim status (continued).

Claim Name	Claim #	Grant #	Expiry	Lease	Owner	Owned
Laura	9	93454	95.02.06		BYG	100%
HWI	9	YA23835	01.02.06		BYG	100%
HWI	10 F-12F	YA23836-YA23838	01.02.06		BYG	100%
HWI	13-17	YA23839-YA23843	01.02.06		BYG	100%
HWI	1 F-8F	YA24813-YA24820	99.02.06		BYG	100%
DD	1-48	YA59596-YA59643	98.02.06		BYG	100%
EEK	1-18	YA87210-YA87227	99.02.06		BYG	100%
ICT	1-36	YA86699-YA86734	99.02.06		BYG	100%
ONE	1 F	YA92921	99.02.06		BYG	100%
ONT	1-43	YA87167-YA87209	99.02.06		BYG	100%
ONT	44-51	YA92655-YA92662	99.02.06		BYG	100%
TBR	1-8	YA86690-YA86697	99.02.06		BYG	100%

Tawa property claim status.

Claim Name	Claim #	Grant #	Expiry	Lease	Owner	Owned
TAWA	1-12	YA75263-YA75274	98.01.03		BYG	100%
TAWA	15-24	YA75277-YA75286	98.01.03		BYG	100%
TAWA	25F-26F	YA95051-YA95052	99.01.03		BYG	100%
TAWA	27-34	YA95151-YA95158	99.01.03		BYG	100%
TAWA	47-63	YA95163-YA95179	99.01.03		BYG	100%
TAWA	64-71	YA95301-YA95308	99.01.03		BYG	100%
TAWA	72-79	YB06963-YB06970	99.01.03		BYG	100%
TAWA	83-90	YB06971-YB06978	97.01.03		BYG	100%

Notes:

- Quartz Claim Map 1151-3
- Scale 1:30,000
- February 22, 1994
- F = fraction

MINERALOGICAL REPORTS

Author	Date	Ore	Test Work
Petruk	1965	Webber Zone	XRD & Microscopy
Owens	1968	Huestis Zone	XRD & Microscopy
Chamberlain	1968	Arctic, Huestis & Webber	XRD, Microscopy, Flotation & Cyanidation
Owens	1968	Huestis Zone	XRD & Microscopy
Schmidt	1969	Huestis & Webber	XRD & Microscopy
Saager	1969	Huestis & Webber	XRD & Microscopy
Bianconi & Saager	1970	Huestis & Webber	XRD & Microscopy

METALLURGICAL REPORTS

Author	Date	Ore	Test Work
Britton Research Vancouver	Dec 1967	Webber & Huestis	Flotation, Cyanidation Gravity Separation & Work Index.
Mines Branch Ottawa	Jul 1967	Webber & Huestis	Flotation, Cyanidation Gravity Separation Barrel Amalgamation
Cominco Ltd. Trail	May 1968	Webber & Huestis	Flotation, Cyanidation
Mines Branch Ottawa	May -Sep 1968	Webber & Huestis	Flotation, Cyanidation
Lakefield Ontario	Jul 1974	Huestis & Webber	XRD & Microscopy Flotation
Kamloops Research & Assay Labs Ltd. Kamloops	Jan 1976	Huestis & Webber	Flotation Gravity Separation
Kilborn Vancouver	Jun 1976	Webber & Huestis	Mill operation & Flotation
Bacon Donaldson Vancouver	Jul 1976	Huestis	Gravity Separation Arsenopyrite oxidation
Hazen Research Colorado	Jan 1986	Brown McDade Oxide & Sulfide	Cyanidation, Columns, Bottle rolls & Vat. Work Index, Flotation & Pressure Oxidation
Lakefield Ontario	Mar 1987	Huestis, Flex & Webber	Cyanidation
Lakefield Ontario	Nov 1988	Huestis	Gravity Separation
Coastech N. Vancouver	Mar 1989	Brown McDade Oxide & Sulfide	Cyanidation, Columns & Bottle rolls. Work Index Flotation & Thickening
Lakefield Ontario	Mar 1989	Brown McDade Sulfide	Cyanidation, Flotation & Gravity Separation.
Lakefield Ontario	Jul 1989	Huestis	Flotation & Cyanidation
Eimco Utah	Sep 1989	Huestis Concentrates	Cyanidation without & with prior Bio-oxidation

GENERAL INFORMATION ON STOCKPILES AND TAILING

AS REPORTED BY B.Y.G.

	<u>Samples</u>	<u>Vol(m³)</u>	<u>S.G.(t/m³)</u>	<u>Tonnage</u>	<u>Au g/t</u>	<u>Ag g/t</u>
Brown-McDade	13	3,887	2.56	5,970	4.9	58.8
Webber	26	12,391	2.56	19,032	4.9	250.3
Heustis Upper Portal	31	11,718	2.56	17,999	3.0	73.4
Heustis Lower Portal	20	4,463	2.56	6,855	4.9	96.2
Tailings	6			18,182	7.5	76.1
Total Milling Reserve				68,038	5.1	124.6

ESTIMATED B.Y.G. MILL OPERATING COSTS*

<u>Item</u>	<u>CANADIAN \$/METRIC TON MILLED</u>			
	<u>MTPD Average Rate - 365 D/YR</u>			
	350	500	700	1,000
Labor and supervision @ average \$65,000 per annum loaded rate				
- 18	\$ 9.15			
- 21		\$ 7.47		
- 23			\$ 5.85	
- 26				\$ 4.63
Power	5.99	5.24	4.46	3.73
Reagents	5.01	5.01	4.80	4.80
Op. and repairs supplies	<u>4.00</u>	<u>3.00</u>	<u>2.50</u>	<u>2.00</u>
TOTAL	\$24.15	\$20.72	\$17.61	\$15.16

*Estimated by Michael Ross, Metallurgist and President of Orocon, who will probably be the mill contractor. His firm has specialized in gold mill construction in the Northwest Territories, Yukon and remote areas of British Columbia.

ITEMIZED B.Y.G. MILL LABOR, REAGENTS,
STEEL AND POWER (*)

		<u>Metric Tons Per Day</u>			
	<u>350</u>	<u>500</u>	<u>700</u>	<u>1,000</u>	
Mill Operators	1	2	3	4	
CN/Gr. Operators	4	4	4	4	
Helper	4	4	4	4	
Mech./Elec.	3	4	5	6	
Laborer/reag/spore	2	3	3	4	
Assay	2	2	2	2	
Mill foremen/refin	1	1	1	1	
Mill supt.	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
	18	21	23	26	

		<u>Can. \$/ Cost Per Metric Ton @ Various Rates</u>				
<u>Reagents</u>	<u>Unit</u>	<u>350</u>	<u>500</u>	<u>700</u>	<u>1,000</u>	
Steel	0.60	2.00	1.20	1.80	1.08	
Flocc	2.00	0.08	0.16	0.05	0.10	
Lime	0.17	4.00	0.68	4.00	0.68	
NacN	1.20	2.10	2.52	2.10	2.52	
Carbon	1.30	0.08	0.10	0.06	0.08	
NaOH	0.70	0.05	0.03	0.03	0.02	
Flux	0.50	0.03	0.02	0.03	0.02	
HCl	0.10	0.10	0.01	0.08	0.01	
SO ₂	0.18	1.60	<u>0.29</u>	1.60	<u>0.29</u>	

225+ = 140 KW 5.01 4.80

<u>Power</u>	<u>350</u>	<u>500</u>	<u>700</u>	<u>1,000</u>	
KW	760	950	1,150	1,350	
¢/KW hr. - 11.5¢					
\$/T	\$5.99	\$5.24	\$4.46	\$3.73	

*Estimated by Michael Ross

PROCESS DESIGN CRITERIA

1. OXIDE ORE

2. ORE CHARACTERISTICS

Run-of-mine ore size, % passing 12 inches	98
Run-of-mine ore moisture %	3
Specific gravity	2.7*
Bulk density, lbs/ft ³	100*

*assumed, measured SG value of Composite A was 2.64

3. PRODUCTION CRITERIA

Design throughput capacity - tonnes/hour	31.25
- tonnes/day	750
Average production rate - tonnes/day	700
- tonnes/year	255,000
Operating days per year	365
Operating hours per year	7,884
Net % plant availability	93
Typical ore feed grade - Au oz/ton	0.22
- Ag oz/ton	2.0
Annual gold recovery (based on 0.22 oz/ton Au head), %	85.5
Average gold production - oz	48,060
Average silver recovery (based on 2.0 oz ton Ag head), %	50.0
Annual silver production - oz	255,500

4. ORE STORAGE

Open pit stockpile capacity, tons

5. GRINDING

Ore feed rate tons/hour - No. 1 mill	31.25
Ore feed size - % passing 12.7 mm (1/2")	80
Product size - % passing 100 micron (150 mesh)	80
- % passing 74 micron (200 mesh)	70
Bond work index	16.0
Req. grinding HP	671
Ball consumption, lbs/ton	1
Liner consumption, lbs/ton	0.5
Fine ore capacity, tons/bin	250
Thickener unit area, ft ² /TPD	4.2
Thickener underflow density, % solids	42-45
Flocculant addition, lbs/ton	0.08

6. CYANIDATION (CIL)

pH	10.5-11
Lime (95% CaO) consumption, lbs/ton	4.0
Cyanide concentration, g NaCN/L	0.4 to 0.2
Sodium Cyanide addition, lbs/ton	2.1
Retention time, hours	24
Number of stages (CIL)	6
Anticipated residue grade - Au, oz/ton	0.03
- Ag, oz/ton	1.0
Gold extraction, %	86.4
(based on 0.22 oz/ton Au head)	
Silver extraction, %	60
(based on 2.0 oz/ton Ag head)	
Retention time per stage, hours	4
Average carbon pulp loading, g/L	20-25
Average carbon loading - Au, oz/ton	50
- Ag, oz/ton	200
Carbon fine loss, lbs/ton	0.07-0.1
Carbon size, mesh	6x12
Carbon safety screen size, mesh	35
Carbon launder screen size, mesh	20
Gold adsorption efficiency, %	99
Silver adsorption efficiency, %	83

7. CARBON DESORPTION AND ELECTROWINNING

Operation - hours/day	24
- days/week	7
Carbon transfer rate, tonnes/day	4.0
Stripping temperature, °F	200
Barren strip solution design flow, USGPM	10
Barren strip bleed, %	15
Strip solution - g NaCN/L	3
- g NaOH/L	10
Carbon loading - initial loading - Au, oz/ton	50
- Ag, oz/ton	250
- final loading - Au, oz/ton	3-4
- Ag, oz/ton	15-20
Carbon bulk density - lbs/ft ³ dry	37
- lbs/ft ³ wet	55
- lbs/ft ³ flooded	80
Caustic soda consumption, lbs/ton	0.3

8. BULLION PRODUCTION

Refinery operation, days/week	2
Charges/week	2
Flux mixture, % - Niter	40-50
- Silica	30-25
- Borax	30-25

BYG 700 MTPD MILL CONVERSION
COST SUMMARY

<u>Item</u>	<u>\$ 000's</u>
Equipment	2,206,000
Labour - 3,025 manshifts: 6 - 10 hr. shifts per week @ \$310/manshift	937,750
Winter labour productivity factor (20%)	187,550
Mobilization and demobilization, employee transportation	50,000
Transportation - equipment and material (less ball mill and CIL tanks)	180,000
Site and yard preparation cleanup and unloading labour	30,000
Equipment rentals	140,000
Consumables	65,000
Site supervision	140,000
Concrete, excavation and demolition - 360 yds. @ 900/yd assuming gravel available	<u>324,000</u>
Subtotal	4,260,300
Contractor Administration @ 4%	170,400
Contractor Profit - 15%	<u>639,050</u>
TOTAL	5,069,700
Target price - \$5,069,700 incl. 10% fixed and 5% variable fee	
Bonus fee - 5%	

EQUIPMENT LIST - 700 MTPD - C.I.P. MILL

Qty.	Description	Basis	Installation manshifts	Equipment Cost 000's	Motor HP
Lot	Install grizzly (13" slot opening) & coarse ore bin (75t) & supports, 25' Forano apron feeder	new	50	55	10
Lot	Ramp	new	50	15	--
1	Rock Hammer	used	20	40	5
1	C.O. bin u/s conveyor - 36" w. x 100' long incl. supports, disch. arrangement	used/ exist	65	35	25
Lot	Overhaul crushing plant & ready for operation incl. electrical equipment & labour	new/ used	160	40	200 exist
1	Dust collector & ducting & screw conveyor (dry baghouse)	new/ used	35	20	10
Lot	Install 2 slot feeders on fine ore bins & transfer belt (conv. #9)	new	70	40	5+5+3
1	9'x11' Hardinge Ball Mill to replace #1 ball mill - incl. ball charge & transportation	used	420	251	500
1	Compressor for BM clutch	new	2	5	5
2	15" cyclones & launders	used	20	15	--
2	Belt scales	new	15	18	--
1	35' dia. Hi Rate Thickener & supports (Enviroclear), incl. transport	used	100	105	3+7.5
6	20' dia. x 23'6" high leach tanks - located inside incl. baffles & bridges, Kambalda screens, launders	used	300	220	--
6	Agitators for above tanks incl. some new prop. blades	used	60	5	6@15

EQUIPMENT LIST - 700 MTPD - C.I.P. MILL

Qty.	Description	Basis	Installation manshifts	Equipment Cost 000's	Motor HP
2	Carbon stripping columns - 5'6" dia. x 17' high, mild steel, insulated, incl. screens	new	30	25	--
1	Barren electrolyte holding & heater tank - 10' dia. x 8' high (mild steel, insulated) - possible thickener use	used	15	8	--
Lot *	Reagent mixing feeding equipment, incl. tanks, mixers, piping & pumps	new/ used	40	12	5
1	Sodium cyanide mixing & feed system using 2 ton sodium cyanide containers incl. circulating pump	new/ used tank	12	18	5
Lot	Painting	--	30	5	--
Lot	Building modifications	--	50	5	--
Lot	Mill tools (see partial list)	used for construction	--	40	--
Lot	Engineering & procurement & on site engineering - approx. 50 drawings - incl. travel & other expenses	--	--	160	--
1	Reaction tank - 14' x 14' for SO ₂ /air cyanide destruction, incl. agitators	new	30	40	1@20
1	SO ₂ storage tank (rail car) incl. transp.	used	25	20	--
Lot	SO ₂ piping, valves, instrumentation, drier	new/ used	40	30	--
1	Shop compressor - 120 CFM @ 100 psig	new	5	17	25

EQUIPMENT LIST - 700 MTPD - C.I.P. MILL

Qty.	Description	Basis	Installation manshifts	Equipment Cost 000's	Motor HP
Lot	Refinery equipment incl. manual tilting propane fired crucible type furnace, slag & bullion moulds, fan (5,000 CFM), security encl., (expanded metal), hoods	new/ used	45	45	5
1	Carbon holding bin	used	5	2	--
Lot	CIP process piping for stripping, acid washing, electrowinning sections, incl. valves & eductors	new	120	30	--
Lot	Other process piping & valves incl. tails line (uninsulated)	new/ used	220	110	--
1	40 tonne lime silo & screw feeder incl. transport	used	30	10	1
Lot	Structural steel stairs, platforms, etc.	new/ used	140	120	--
Lot	Electrical equipment, starters, disconnects, cable, pushbuttons, 2 control panels, basic instrumentation	new/ used	320	280	20HP lighting
Lot	MCC's, lunchroom, mill laboratory	new	60	18	--
1	Eductor water tank	exist/ modify	8	1	--
Lot	Mill laboratory equipment (see list)	new/ used	10	15	--
1	Carbon acid treatment tank - 5'6" x 17' stainless steel/FRP	new	3	15	--

EQUIPMENT LIST - 700 MTPD - C.I.P. MILL

Qty.	Description	Basis	Installation manshifts	Equipment Cost 000's	Motor HP
Lot	Tailing water reclaim system incl. pole line - allowance	new	100	85	75
Lot	Process, fresh, reclaim water systems	exist/ modify	30	5	--
	TOTAL		3,025	2,206	1,343

Flocculant (for Thickener)
Acid for carbon acid wash
Acid wash system
Lime system for cyanide destruction
Sodium hydroxide

PUMP SCHEDULE

Note: Schedule is based on A-C/SALA pumps

Item	Qty	Size	USGPM	TDH	Oper HP	Wet End	Description
1	2	5x4	428	55	25	rubber	Primary cyclone feed pump
2	1	4x3	260	35	10	rubber	Thickener bypass pump
3	1	5x4	241	40	10	rubber	Thickener U/F pump
4	1	2"	75	120	10	steel	Eductor water pump
5	1	2"	100	20	7.5	VASA-G	Grinding area sump pump
6	1	2"	100	40	7.5	VASA-G	Leach/thickener area sump pump
7	1	1"	50	25	5	VASA-G	Carbon area sump pump
8	1	2x1	150	170	15	CSO	Process & gland water pump
9	2	2x1	250	60	10.0	CSO	Grinding water pump
10	1	1"	-	20	2	VASA-G	Acid area sump pump
11	2+1	-	10	30	1	magnetic	Eluate pumps
12	1+1	-	10	30	<u>0.5</u>	magnetic	Acid pump
TOTAL		16			105		

REAGENT PUMPS

Quantity	Description
3	Cyanide metering pumps - pulsafeeder
1	Flocculant Metering Pump
1	Sodium Cyanide Pump (magnetic)

Mt. Nansen property claim status .

Claim Name	Claim #	Grant #	Expiry	Lease	Owner	Owned
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Big Thing		4329	14.10.23	Y	BYG	100%
Amalee		4351	95.03.18	Y	BYG	100%
Shamrock		4354	98.10.09	Y	BYG	100%
Nansen		4359	98.10.09	Y	BYG	100%
Buster		4360	14.10.23	Y	BYG	100%
Spot		4361	98.10.09	Y	BYG	100%
Clarence		4363	98.10.09	Y	BYG	100%
Rex		4366	14.10.23	Y	BYG	100%
Senorita		4367	95.03.18	Y	BYG	100%
Areip		4368	98.10.09	Y	BYG	100%
Phyllis		4369	98.10.09	Y	BYG	100%
Lucky Thing		4372	98.10.09	Y	BYG	100%
Bluebell		39191	98.10.09	Y	BYG	100%
Queen		55620	95.03.18	Y	BYG	100%
Leroi		55621	95.03.18	Y	BYG	100%
Duke		55625	95.03.18	Y	BYG	100%
Rub		55633	98.10.09	Y	BYG	100%
Tub		55634	14.10.23	Y	BYG	100%
Pub		55663	98.10.09	Y	BYG	100%
Sun Dog		55665	98.10.09	Y	BYG	100%
Cub		55666	98.10.09	Y	BYG	100%
Buck		55667	14.10.23	Y	BYG	100%
Hope		55795	95.03.18	Y	BYG	100%
Jam		55890	98.10.09	Y	BYG	100%
Pam		55892	98.10.09	Y	BYG	100%
Dome	1-7	73537-73543	98.02.06		BYG	100%
Dome	8-18	73694-73704	99.02.06		BYG	100%
Dome	19	73705	99.02.06		BYG	100%
Dome	20-22	73706-73708	99.02.06		BYG	100%
Dome	25-28	77746-77749	98.02.06		BYG	100%
Dome	33-43	77754-77764	98.02.06		BYG	100%
Dome	47-66	77768-77787	98.02.06		BYG	100%
Dome	78-84	81842-81848	01.02.06		BYG	100%
Dome	86	81850	01.02.06		BYG	100%
Jeff	1-5	77798-77802	98.02.06		BYG	100%
Jeff	7	77804	98.02.06		BYG	100%
Joanne	1-6	74283-74288	99.02.06		BYG	100%

Mt Nansen property claim status (continued).

Claim Name	Claim #	Grant #	Expiry	Lease	Owner	Owned
Laura	9	93454	95.02.06		BYG	100%
HWI	9	YA23835	01.02.06		BYG	100%
HWI	10 F-12F	YA23836-YA23838	01.02.06		BYG	100%
HWI	13-17	YA23839-YA23843	01.02.06		BYG	100%
HWI	1 F-8F	YA24813-YA24820	99.02.06		BYG	100%
DD	1-48	YA59596-YA59643	98.02.06		BYG	100%
EEK	1-18	YA87210-YA87227	99.02.06		BYG	100%
ICT	1-36	YA86699-YA86734	99.02.06		BYG	100%
ONE	1 F	YA92921	99.02.06		BYG	100%
ONT	1-43	YA87167-YA87209	99.02.06		BYG	100%
ONT	44-51	YA92655-YA92662	99.02.06		BYG	100%
TBR	1-8	YA86690-YA86697	99.02.06		BYG	100%

Tawa property claim status.

Claim Name	Claim #	Grant #	Expiry	Lease	Owner	Owned
TAWA	1-12	YA75263-YA75274	98.01.03		BYG	100%
TAWA	15-24	YA75277-YA75286	98.01.03		BYG	100%
TAWA	25F-26F	YA95051-YA95052	99.01.03		BYG	100%
TAWA	27-34	YA95151-YA95158	99.01.03		BYG	100%
TAWA	47-63	YA95163-YA95179	99.01.03		BYG	100%
TAWA	64-71	YA95301-YA95308	99.01.03		BYG	100%
TAWA	72-79	YB06963-YB06970	99.01.03		BYG	100%
TAWA	83-90	YB06971-YB06978	97.01.03		BYG	100%

Notes:

- Quartz Claim Map 1151-3
- Scale 1:30,000
- February 22, 1994
- F = fraction

MINERALOGICAL REPORTS

Author	Date	Ore	Test Work
Petruk	1965	Webber Zone	XRD & Microscopy
Owens	1968	Huestis Zone	XRD & Microscopy
Chamberlain	1968	Arctic, Huestis & Webber	XRD, Microscopy, Flotation & Cyanidation
Owens	1968	Huestis Zone	XRD & Microscopy
Schmidt	1969	Huestis & Webber	XRD & Microscopy
Saager	1969	Huestis & Webber	XRD & Microscopy
Bianconi & Saager	1970	Huestis & Webber	XRD & Microscopy

METALLURGICAL REPORTS

Author	Date	Ore	Test Work
Britton Research Vancouver	Dec 1967	Webber & Huestis	Flotation, Cyanidation Gravity Separation & Work Index.
Mines Branch Ottawa	Jul 1967	Webber & Huestis	Flotation, Cyanidation Gravity Separation Barrel Amalgamation
Cominco Ltd. Trail	May 1968	Webber & Huestis	Flotation, Cyanidation
Mines Branch Ottawa	May -Sep 1968	Webber & Huestis	Flotation, Cyanidation
Lakefield Ontario	Jul 1974	Huestis & Webber	XRD & Microscopy Flotation
Kamloops Research & Assay Labs Ltd. Kamloops	Jan 1976	Huestis & Webber	Flotation Gravity Separation
Kilborn Vancouver	Jun 1976	Webber & Huestis	Mill operation & Flotation
Bacon Donaldson Vancouver	Jul 1976	Huestis	Gravity Separation Arsenopyrite oxidation
Hazen Research Colorado	Jan 1986	Brown McDade Oxide & Sulfide	Cyanidation, Columns, Bottle rolls & Vat. Work Index, Flotation & Pressure Oxidation
Lakefield Ontario	Mar 1987	Huestis, Flex & Webber	Cyanidation
Lakefield Ontario	Nov 1988	Huestis	Gravity Separation
Coastech N. Vancouver	Mar 1989	Brown McDade Oxide & Sulfide	Cyanidation, Columns & Bottle rolls. Work Index Flotation & Thickening
Lakefield Ontario	Mar 1989	Brown McDade Sulfide	Cyanidation, Flotation & Gravity Separation.
Lakefield Ontario	Jul 1989	Huestis	Flotation & Cyanidation
Eimco Utah	Sep 1989	Huestis Concentrates	Cyanidation without & with prior Bio-oxidation

GENERAL INFORMATION ON STOCKPILES AND TAILING

AS REPORTED BY B.Y.G.

	<u>Samples</u>	<u>Vol(m³)</u>	<u>S.G.(t/m³)</u>	<u>Tonnage</u>	<u>Au g/t</u>	<u>Ag g/t</u>
Brown-McDade	13	3,887	2.56	5,970	4.9	58.8
Webber	26	12,391	2.56	19,032	4.9	250.3
Heustis Upper Portal	31	11,718	2.56	17,999	3.0	73.4
Heustis Lower Portal	20	4,463	2.56	6,855	4.9	96.2
Tailings	6			18,182	7.5	76.1
Total Milling Reserve				68,038	5.1	124.6